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THE AGRICULTURAL SITUATION

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A Brief Summary of Economic Conditions

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FARMERS begin a new year—and a new decade—with the best prospects in a long time. Consumer buying power continues relatively high, and the prices of a number of farm products are the highest in more than 2 years. Dollar wheat became a reality in late December, and cotton topped 11 cents a pound. Markets were bidding \$1.30 a bushel for soybeans, a crop that was scarcely known commercially in the United States a dozen years ago. Dairy products were selling in late December at highest prices in nearly 2 years. The worst spot in the picture is the low price of hogs—lowest in more than 5 years—due to a production of almost record proportions in 1939. Ratio of hog prices to corn prices has become less favorable to hog producers. Probabilities are there will be no increase in pig crop this spring over last * * *. What average general farm price level in 1940? Much depends upon continuation of a conservative production program. Current supplies of food, feed, and fibers are more than enough to satisfy prospective domestic and foreign needs.

Commodity Reviews

DEMAND: Improved

THE substantially higher levels of industrial production and consumer income assure a considerably better domestic demand for farm products in the early months of 1940 than a year earlier.

Industrial production in the final quarter of 1939 exceeded that of any previous corresponding period by at least 6 percent. The carry-over effects of such sharp gains as occurred during the final months of the year are usually apparent in consumer income for several additional months.

Unlike industrial production, the income of industrial workers and of consumers in general failed to reach previous peak levels during the final quarter of last year. However, consumer buying power at the end of 1939 was as high as at any time in the last 10 years. Increased efficiency of labor and a lower price level explain in large part the lower consumer income, relative to the rate of industrial production, than 10 years earlier.

In addition to a 12 percent lower national income in 1939 than in the late 1920's the large number of unemployed industrial workers was evidence that economic activity had not yet reached "prosperity" levels. There are perhaps five times as many non-agricultural workers without jobs now as were unemployed in 1929. Although perhaps two-thirds of the increase is accounted for by the 10-year growth in the number of persons gainfully attached to nonagricultural occupations there would apparently be twice the unemployment that existed in 1929 even if in the interim there had been no increase in the number of available workers.

Although the domestic demand for agricultural products has shown significant betterment in the past 6 months, and it is expected that the higher level of demand attained during this period will be well sus-

tained, at least through the first quarter of 1940, it is apparent that further substantial increases in industrial production and employment would be necessary to a restoration of general prosperity comparable to that which prevailed in the late 1920's.

—P. H. BOLLINGER.

INCOME: Increase

Cash income from farm marketings declined seasonally in November but was larger than in the same month in 1938. Total for 11 months in 1939 was smaller than in 1938 by about 100 million dollars, but this was more than offset by larger Government payments for conservation practices and on account of parity.

Fruits, vegetables, and meat animals were the only groups showing larger cash income from marketings in the 11 months of 1939 than in the like period of 1938. Grains, cotton and cottonseed, tobacco, dairy products, and chickens and eggs yielded smaller cash income. Government payments during the period totaled 272 million dollars more than in 1938.

Month and year	Income from marketings	Income from Government payments	Total
November:			
1939 ..	\$665,000,000	\$75,000,000	\$740,000,000
1938 ..	659,000,000	48,000,000	707,000,000
1937 ..	713,000,000	3,000,000	716,000,000
January-November:			
1939 ..	6,360,000,000	715,000,000	7,075,000,000
1938 ..	6,457,000,000	443,000,000	6,900,000,000
1937 ..	7,440,000,000	358,000,000	7,798,000,000

PRICES: Lower

The general level of prices received by farmers was 1 point lower on December 15 than in mid-November. Local market prices of grains were 8 points higher, and of cotton and cottonseed 7 points higher. These sharp advances were more than offset,

however, by a 6-point decline in meat animal prices, and a decline of 20 points in poultry and egg prices received by farmers.

Indexes of farm product prices averaged 92 percent of pre-war during 1939. This was 3 points below the average level for 1938. The all-commodity index reached the peak for the year on September 15, 1939, following the outbreak of the European war. Cotton and cottonseed, fruit, and truck crops were the only groups of commodities showing a higher

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1938			
December..	96	120	80
1939			
January..		120	78
February..		120	77
March.....		120	76
April.....		120	74
May.....		120	75
June.....		120	74
July.....		120	74
August.....		119	74
September.....		122	80
October.....		122	80
November.....		122	80
December.....		122	79

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by farmers at local markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, 1909-July 1914	December 1909-13	December 1938	November 1939	December 1939	Parity price, December 1939
Cotton, lb.....	12.4	12.2	8.20	8.80	9.71	15.87
Corn, bu.....	64.2	57.7	43.1	46.8	50.3	82.2
Wheat, bu.....	88.4	88.7	53.6	73.1	82.4	113.2
Hay, ton.....	11.87	11.99	6.81	7.51	7.71	15.19
Potatoes, bu.....	69.7	62.3	61.3	69.2	70.8	86.5
Oats, bu.....	39.9	38.3	24.4	32.1	34.7	51.1
Soybeans, bu.....	(¹)	(¹)	.67	.82	.97	.....
Peanuts, lb.....	4.8	4.6	3.31	3.39	3.43	6.1
Beef, cattle, cwt.....	5.21	5.03	6.40	6.89	6.85	6.67
Hogs, cwt.....	7.22	6.73	6.90	5.87	5.03	9.24
Chickens, lb.....	11.4	10.6	13.6	12.4	11.7	14.6
Eggs, doz.....	21.5	29.9	27.0	25.8	20.5	37.0
Butterfat, lb.....	26.3	29.9	27.0	28.1	28.5	36.8
Wool, lb.....	18.3	18.6	20.3	27.6	27.5	23.4
Veal calves, cwt.....	6.75	6.74	8.04	8.64	8.41	8.64
Lambs, cwt.....	5.87	5.52	7.08	7.48	7.38	7.51
Horses, each.....	136.60	132.10	79.80	77.60	77.10	174.80

¹ Prices not available.

² Revised.

³ Adjusted for seasonality.

WHEAT: A Dollar

Dollar wheat became a reality in December as reports of continued drought came into the markets and it appeared that United States production in 1940 would be below domestic requirements. This means that despite reduced exports the carry-over of wheat will be much smaller a year and a half hence than on July 1 next.

Meanwhile, there is plenty of wheat for all requirements, the 1939-40 domestic supply having been estimated at close to 1 billion bushels. The carry-over on July 1 next has been forecast at more than 250 million bushels, and a part of this will be used to make up the deficiency in the 1940 crop.

The Argentine wheat harvest is underway and the first official estimate places the crop at 147.0 million bushels, which represents a considerable reduction in the last part of the season as a result of unfavorable weather. The crop in Australia has been estimated at 182.6 million bushels, compared with 154.4 million in 1938.

World—excluding U. S. S. R. and China—production of wheat is estimated at 4,250 million bushels, or 335 million less than the record crop of 1938. But the world supply of wheat for the current year is about 255 million bushels larger than in 1938-39, since there was an increase in the carry-over last July of 590 million bushels compared with July 1938.

COTTON: Eleven Cents

Cotton in the 10 spot markets topped 11 cents a pound in mid-December. This was the highest since August 1937. Factors in the advance include the greatly increased domestic consumption following the outbreak of the European war, improvement in domestic business conditions, the large sales of American cotton for export, increased cotton consumption in a number of important foreign countries, and the Government loan program.

Domestic mill consumption in November was the largest on record for that month. Mill activity slackened somewhat in late November but continued exceptionally high in December. Activity may decline in the next 2 or 3 months, but for the year ended July 31 next the total should exceed greatly that of last season.

Cotton consumption has declined in German-controlled territory, but this appears to be more than offset by increases in Great Britain, Italy, Holland, and Japan. United States exports totaled 2,900,000 bales from August 1 to December 27, or about 1,000,000 bales more than in the like period of 1938. Sales of cotton for export under the Domestic Export Program totaled 5,550,000 bales through December 27.

The export-payment program and the exportation of a substantial part of the more than 600,000 bales of Government-loan cotton exchanged to Great Britain for rubber were important factors contributing to the sharp increase in exports of American cotton in the last 5 months of 1939.

FEED: Plentiful

The supply of feed this season is the largest since 1932, but not so large when divided into the increased number of livestock on farms. The total supply—of corn, oats, barley, grain sorghums, wheat millfeeds, and gluten feed remaining October 1 has been estimated at 116 million tons for 1939-40. This compares with 110 million tons in 1938-39, and with 106 million tons average in the predrought period 1928-32.

Feed supplies available after October 1

	1928-29 to 1932-33	1938-39	1939-40
	1,000 tons	1,000 tons	1,000 tons
Corn.....	76, 097	81, 908	89, 041
Oats.....	15, 470	14, 022	12, 501
Barley.....	6, 750	6, 072	6, 631
Grain sorghums...	2, 737	2, 776	2, 327
Wheat millfeeds...	4, 826	4, 703	4, 750
Gluten feed and meal.....			650
Total..	106, 479	110, 089	115, 900

The number of animal units on farms has been estimated at 136 million for 1939-40. This compares with 127 million in 1938-39, and with 138 million average in the predrought period 1928-32. The feed supply divided into the number of animal units indicates a supply per animal unit of 0.85 ton for 1939-40, as compared with 0.87 ton in 1938-39, and with 0.77 ton average for the predrought period.

The supply of high protein feeds for domestic utilization, in addition, is estimated at approximately 4.0 million tons for 1939-40, compared with 3.5 million in 1938-39, and with 2.3 million average for the predrought years. These figures divided into the number of animal units in the respective years show 58 pounds per animal unit for 1939-40, compared with 54 pounds in 1938-39, and with 33 pounds average for the predrought period.

CATTLE: More on Feed

More cattle are being fed in the western States this season than last. The total may equal or exceed the largest for any other season on record. This situation alters the earlier picture that smaller feeding operations in the West would tend to offset to some extent the large increase in the Corn Belt States.

July-November movement of stocker and feeder cattle—from stockyards and direct—into the Corn Belt States was the largest for the period in 15 years. An increase in numbers fed is reported in the 7 States west of the Continental Divide; about the same number of cattle is being fed this season as last in the 4 Rocky Mountain States. Reductions are reported in Texas, due to drought.

Marketings of grain-fed cattle will be larger this winter and next spring than last, but supplies of the lower grades of steers and of cows and heifers will be smaller. Total may be larger, the increase in grain-fed cattle more than offsetting the decrease in supplies of other cattle.

Prices of the better grades of slaughter steers weakened during the second week of December after advancing in late November and early December. Prices of such cattle were slightly lower than at the same time a year earlier. Prices of light-weight slaughter cattle have been high in relation to prices of heavy weight cattle in recent months. Prices of stockers and feeders were slightly higher than at the same time a year earlier.

HOGS: Prices Down

Hog marketings are increasing seasonally. Prices are around the lowest figures in 5 years. The 1939 spring and fall pig crops totaled 84 million head, which was about 13 million more than in 1938. This sharp increase has raised hog production to the pre-drought level.

The average of prices received by farmers for hogs during the first 11 months of 1939 was about \$6.50 as compared with \$7.75 in 1938. Marketings of hogs will be reduced seasonally in late winter and early spring, but producers must look to improved consumer demand to offset some of the adverse effects of increased production.

The ratio of hog prices to corn prices is less favorable for hog producers than it has been in more than 2 years. This suggests that the spring pig crop will not be increased in 1940 over 1939. A similar adjustment in the 1940 fall crop would help to improve the supply situation.

United States exports of hog products probably will increase in 1940 as a result of the European war, but no marked increase seems probable during the next few months. British imports of bacon from Denmark and Canada have continued in large volume since the outbreak of the war. United States exports of pork and lard totaled about 337.5 million pounds in the first 10 months of 1939. This was about 37 percent larger than in the corresponding period of 1938.

Pork and lard have been added to the list of surplus commodities under

the Food Stamp Plan, and the Federal Surplus Commodities Corporation has been authorized to buy lard and certain cuts of salt pork for relief distribution.

LAMBS: Prices Up

The increase in lamb feeding in the Corn Belt is expected to be larger than seemed probable in early November and the decrease in the western States will be smaller. Supplies of slaughter lambs may be smaller during the late months of the fed-lamb marketing season this year than last, due to a decrease in feeding operations in the western States. The entire season—December–April—will show an increase, but likewise this will be offset by the stronger consumer demand for meats and the higher prices for wool obtained from slaughter lambs.

The 1939 lamb crop totaled nearly 32 million head and was only about 1 percent smaller than the high record crop of 1938. Small increases were reported in most of the important native and western sheep-producing States, except Texas where unfavorable weather conditions at lambing time greatly reduced the size of the lamb crop.

A larger proportion than is usual of the lamb crop was marketed in only feeder condition, since range conditions were unfavorable during most of the summer and fall. This resulted in a substantial decrease in slaughter supplies during the spring lamb marketing season—May–November. Federally inspected slaughter of sheep and lambs totaled 15,582,000 head during the first 11 months of 1939, compared with 16,713,000 in the like period of 1938.

Prices of slaughter lambs averaged lower in December than in November. Prices were about the same as a year earlier.

FATS, OILS: Big Supply

The supply of fats and oils is the largest on record. Production of these products from domestic materials

totaled about 8.4 billion pounds in 1939, as compared with 8 billion pounds in 1938. Increased production of lard, pork greases, beef tallow, soybean oil and linseed oil more than offset the reduced output of cottonseed, peanut, and whale oils.

Prices of most fats and oils have declined somewhat since the sharp rise following the outbreak of the European War, but all are higher than the 5-year lows of last August. Prices of lard, cottonseed oil, and corn oil are lower than at this time last year—largely because of the increased lard production—but prices of practically all other fats and oils are higher.

United States imports of fats, oils, and oil-seeds—mostly for industrial purposes—have declined sharply since the outbreak of war, whereas exports of lard, soybeans, and cottonseed oil have increased. Exports of lard to the United Kingdom have declined, but this has been more than offset by increases to a long list of other countries.

The United Kingdom, evidently, is trying to obtain as much as possible of its needed food supplies from countries attached to sterling exchange. Nevertheless, the United States is the only Nation with a large available surplus of lard for export: should shipping difficulties become more acute, the United Kingdom probably will increase purchases of lard in this country at the expense of vegetable oils from more distant places.

DAIRY: Record Output

Milk production probably will set a new high record for the season this winter. There are more cows on farms, and the prices of dairy products recently have been the highest in nearly 2 years. Feed costs more this winter than last, but feed is plentiful, and dairy-feed price ratios are fairly favorable for dairy production. Butter prices in the first half of 1940 are expected to average higher than in 1939.

Milk production totaled more than 111 billion pounds in 1939. This was the largest annual output on Government record, exceeding the preceding peak of 110 billion pounds in 1938. The output of principal manufactured dairy products was somewhat smaller than the record high in 1938, but consumption was large and stocks at the end of the year were down to average proportions.

Much of the increase in butter consumption was in the distribution of this food by the Federal Surplus Commodities Corporation. Per capita consumption of butter and of evaporated milk made new high records in 1939. Consumption of fluid milk and cream was larger than in 1938, reflecting increased consumer buying power—notably in the last quarter of the year.

The basis has been laid for increased production of milk and dairy products in the next few years. The number of milk cows changed relatively little in the last 2 years, but farmers saved a large number of heifer calves and the number of young stock on farms is more than enough to provide for normal replacements in dairy herds.

TRUCK CROPS: Higher Priced

Market prices of vegetables average somewhat higher this winter than last. Consumer buying power is better and some winter vegetables are in smaller supply this season.

Production reports as of December 1 indicated larger supplies of cabbage, carrots, cauliflower, celery, green peppers, and tomatoes grown in the United States, but smaller output of snap beans, cucumbers, eggplant, kale, lettuce and spinach. The acreage of early and second early cabbage, early beets, carrots, celery, onions, and spinach was indicated to be slightly larger than in 1939.

Production of 17 truck crops marketed fresh in 1939 was the largest on Government record. The total was nearly 44 percent larger than the average for the predrought years

1923-32. It was almost three times the quantity produced 20 years ago. Output of eight vegetables for processing was the smallest since 1934, but totaled about 20 percent more than the predrought average.

Stocks of most canned vegetables are much smaller than the large carry-over stocks in 1939, and prospects are that production of most truck crops for canning or manufacture will be increased sharply this year.

FRUITS: Lower Priced

Fresh fruits are selling at slightly lower prices than at this time last year. Domestic demand has improved but the combined production of 13 fruits is the second largest on Government record and exports have been curtailed by the European War. The commercial apple crop was 20 percent larger than the 1938 output, but production of winter pears and citrus fruits was somewhat smaller.

Loss of export markets has forced a larger proportion of the supply of apples, pears, and citrus fruits on the domestic market. Despite the large production, cold storage holdings of apples totaled about the same on December 1 as a year earlier—about 31 million bushels. Large quantities of apples were bought for relief distribution by the Federal Surplus Commodities Corporation.

EGGS: Less Profitable

Egg production has become less profitable to producers. Prices of eggs declined in December, prices of feed went up. In early December more than 6 dozen eggs were required to buy 100 pounds of poultry feed, compared with less than 4 dozen at the same time a year earlier. The feed-egg ratio usually begins to rise by the end of November, but the increase this season has been much greater than usual.

—FRANK GEORGE.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1923-25=100) ¹	Income of industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	(1910-14=100)				Farm wages	Taxes ⁴
				Wholesale prices of all commodities ⁵	Prices paid by farmers for commodities used in— ⁶				
					Living	Pro-duction	Living and pro-duction		
1925	104	98	101	151	164	147	157	176	270
1926	108	102	102	146	162	146	155	179	271
1927	106	100	100	139	159	145	153	179	277
1928	111	100	99	141	160	148	155	179	279
1929	119	107	99	139	158	147	153	180	281
1930	96	88	96	126	148	140	145	167	277
1931	81	67	88	107	126	122	124	130	253
1932	64	46	79	95	108	107	107	96	219
1933	70	48	76	96	109	108	109	85	187
1934	79	61	78	109	122	125	123	95	178
1935	90	69	80	117	124	126	125	103	180
1936	105	80	81	118	122	126	124	111	182
1937	110	94	84	126	128	135	130	126	187
1938	86	73	82	115	122	124	122	124	186
1938—December	104	80	82	112	120	122	120		
1939—January	101	80	82	112			120	117	
February	99	79	82	112			120		
March	98	79	82	112	119	122	120		
April	92	75	82	111			120	121	
May	92	75	81	111			120		
June	98	80	81	110	119	121	120		
July	101	80	81	110			120	126	
August	103	83	81	109			119		
September	111	85	82	115	122	123	122		
October	121	91	82	116			122	126	
November	124	93	82	116			122		
December				115			122		

Year and month	Index of prices received by farmers (August 1909–July 1914=100)							Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chick-ens and eggs	
1925	157	177	172	153	140	153	163	99
1926	131	122	158	143	147	152	159	94
1927	128	128	144	121	140	155	144	91
1928	130	152	176	159	151	158	153	96
1929	120	144	141	149	156	157	162	95
1930	100	102	162	140	133	137	129	87
1931	63	63	98	117	92	108	100	70
1932	44	47	82	102	63	83	82	65
1933	62	64	74	105	60	82	75	70
1934	93	99	100	103	68	95	89	73
1935	103	101	91	125	118	108	117	86
1936	108	100	100	111	121	119	115	92
1937	126	95	122	123	132	124	111	93
1938	74	70	73	101	114	109	108	78
1938—December	63	70	73	108	109	112	127	80
1939—January	66	71	76	96	112	109	97	78
February	66	70	78	108	116	107	91	77
March	66	71	81	114	116	100	88	76
April	67	70	82	102	114	95	87	74
May	72	72	85	110	112	92	85	75
June	73	73	93	105	107	94	83	74
July	66	73	80	101	107	96	89	74
August	64	71	70	101	101	100	90	74
September	83	76	73	114	117	107	102	80
October	77	74	73	128	112	112	108	79
November	79	75	66	130	107	117	117	79
December	87	82	65	96	101	118	97	79

¹ Federal Reserve Board, adjusted for seasonal variation. ² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1928=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real-estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909–July 31, 1914. ⁷ Preliminary.

Farm Land Values—Where Headed?

THE most drastic changes in farm land values in the history of American agriculture have occurred during the last quarter century. The upward movement in values during and immediately after the World War carried land values to a peak in 1920 that was 70 percent above the 1912-14 average. Values declined about 32 percent from 1920 to 1930, and by 1933 reached a level that was 27 percent under the pre-war average. After 1933 values in the principal agricultural sections again moved upward, the rise beginning from levels that were lower than those prevailing at any time since before 1910.

For the country as a whole values rose 4 percent each year from 1933 to 1937. After 1937 the tone of the farm real estate market was less favorable than during the preceding 4 years and values were unchanged during 1938 and declined slightly during the year ended last March. Average values in March 1939 were about 15 percent above the 1933 low, although still 16 percent below the 1912-14 average. The indications are that values have strengthened somewhat since last March, but it is probable that the increase has been moderate.

FROM 1912 to 1916, the movement in farm real-estate values appears to have been essentially a continuation of the upward trend that started somewhat before the beginning of the century. Reflecting the influence of war prices, values increased from 8 to 10 percent each year from 1916 to 1919, and then rose over 20 percent during the 12 months ended in March 1920. Although this appears to have been a rapid rise, the land value increases actually were more limited than—and lagged behind—the increases in the prices of farm products and land rents. Both prices and rents increased over 130 percent during the period from 1914-20, in contrast to a 65 percent increase in land values.

Many inquiries have been received by BAE as to the probable course of farm land values in the next few years. The accompanying article discusses certain of the influences affecting values, against a background of a quarter century of history—carrying through the farm land boom during and after the World War, its collapse in the early 1920's, and the moderate recovery in values as farm products prices and income have increased in recent years.—Ed.

The drop in prices received by farmers for their products after 1920 brought about a sharp decline in land values, although values declined less than prices did. Farm prices and income appear to have reached a degree of stability fairly early in the last decade, although it was not until the end of the decade that land values became adjusted to the lower post-war income and price level. Just about the time it appeared that an adjustment had been reached the depression carried prices of farm products and farm income to extremely low levels, again necessitating a complete readjustment in land values.

IN order that past movements of farm land values may be of more significance in evaluating immediate and prospective developments it is necessary that attention be given to changes that have occurred in certain of the factors affecting farm real-estate values.

One important change during the last 25 years relates to the revised outlook for land requirements arising out of population growth. In contrast with the rather rapid and continued expansion expected during the early part of the last quarter century, it is

now believed that the maximum population will be reached sometime in the next 25 years, with land needs not substantially in excess of the amount available at present. Thus, one of the compelling forces influencing value movements before and during the World War is absent in the present situation.

Other changes during the last 25 years which have affected land-value prospects in much the same way as population prospects include: a less favorable export situation, a reduction in crop requirements due to the substitution of machine for animal power, increasing possibilities for using non-agricultural raw materials in place of agricultural, and various improvements in techniques increasing the efficiency of agricultural production. With the present acreage of land in farms it is quite probable that there could be a substantial increase in agricultural production in response to a rise in farm prices.

THE course which land values have taken during the last 25 years has resulted in a changed attitude toward the security of land investments that may influence land value movements, at least in the more immediate future. During the early part of the period under review, the security of land investments was rated highly. Such investments could be readily liquidated and at the same time were expected to increase more or less continuously in value. This expectation arose out of favorable price and value trends following 1900. In many of the principal agricultural sections a decline in land values was practically unknown.

The decline in land values after 1920 is sufficiently fresh in the minds of most farmers so that the possibility of a recurrence of such an optimistic attitude in the very near future appears remote. It is quite possible that as a result of this change in confidence in farm land values farmers may react quite differently to the stimulus of price increases, especially those arising out of war demands. Instead of using

increased earnings to expand operations, it is possible that these earnings may be used to a much greater extent to retire debt obligations and to raise living standards.

THERE has also been a change during the period in the direction in which several of the more immediate market influences are operating. As a result of debt difficulties arising out of low prices and incomes, a substantial area of land is now in the hands of former lenders. The farm land holdings of 5 principal lending agencies are estimated at about 28,000,000 acres. The holdings of commercial banks, mortgage companies, and other similar types not included in this estimate are also substantial.

This situation is likely to have a repressive effect on land values for some time although the degree will depend to a considerable extent upon disposal policies followed. In addition to holdings by corporate lenders, it is probable there has been an increasing accumulation of land in estates and in the hands of elderly farmers wishing to retire. Thus the total area of land that is either pressing on the market or that likely would be offered in response to an increase in land values is much larger than was the case 25 years ago.

HIGHER farm cost levels constitute still another factor that may be expected to restrain value increases. In recent years the prices paid by farmers for commodities used in production have been from one-fourth to one-fifth higher than pre-war, while farm real estate taxes have been about four-fifths above pre-war. It is also possible that somewhat higher rates of return on land investments are currently required than was the case a quarter century ago. The low rates before the World War are usually explained on the basis of expected benefits from rising values which would justify the acceptance of low current earnings. Little or no weight has been given to value increase prospects dur-

ing the more stable periods since the War, and current earnings represented the full return expected.

OFFSETTING in part the effects of the changes tending to limit value increases are those which may be expected to operate in the direction of supporting value increases. Current mortgage interest rates are lower than those prevailing before the war, and if continued for a period may be expected to influence the earnings ratios required by those purchasing farm land. Other changes that may be expected to support value increases include a plentiful supply of credit, and lower cash requirements in case of purchase, particularly in the case of sales by corporate agencies. The amount of credit actually available for loans is affected of course by security requirements, and these probably are somewhat more stringent than was the case before and during the World War.

The expectation of a partial repetition of the World War movement of land values due to the current European war constitutes an additional element that may influence current values. However, it seems doubtful that any substantial increase in values based wholly on this attitude would occur. Even though prices rise as a result of

war demands, such increases are likely to have less influence on land values than was previously the case, because the temporary nature of the levels reached during the World War will be remembered.

Attitudes toward inflation also may have a material influence on values. Many more persons have been inflation-minded in recent years than was the case earlier in the current quarter century. The effect that this factor may come to have is largely unpredictable, but it should be recognized that certain of the conditions favorable to price inflation have existed for a number of years.

IN general, the fluctuations in farm real estate values during the last quarter century have emphasized the desirability of giving but limited weight to current farm price increases in attempting to anticipate the series of future incomes upon which values are primarily based. In addition, when consideration is given to the changes that have occurred in the factors influencing the long-time outlook for land values, temporary price increases for farm products such as those resulting primarily from war conditions would seem to warrant but a mild increase in farm real estate values.

M. M. REGAN.

A Decade of Exports and Imports

UNITED STATES foreign trade in agricultural products varied widely during the 10 years, 1930 to 1939. A precipitate drop—caused by the depression—from the beginning of the decade to 1933 (somewhat relieved by heavy exports of low-priced cotton during 1932 and 1933) was followed by a period of erratic fluctuations under the combined influence of domestic crop shortages, spotty world industrial recovery, and rapidly increasing interference with economic activity by foreign governments. At the end of the decade,

both imports and exports of farm products stood at about 60 percent of their volume in 1929.

The decade was a disastrous one for United States exports of farm products as a whole. The depression of foreign demand from 1929 to 1933 was followed by 4 years of domestic crop shortage, due to drought, which further reduced the volume of farm exports. The subsequent recovery was seriously hampered by two factors: (1) Foreign-government efforts to protect substitute sources of agricultural supply developed while United States

products had been scarce and (2) economic preparations for war in some countries. Furthermore, it was checked early in 1938 by a short recession in foreign economic conditions and brought to a temporary halt by the outbreak of the European War. Since last September every foreign country which imports considerable quantities of American farm products has made its markets subject to complete government control, so that the volume of American farm products absorbed can be expanded or decreased, almost from one day to another, according to the changing dictates of policy.

FROM 1929 to 1933, farm exports declined by 21 percent in quantity and 59 percent in value. The decline in commodities other than cotton was even more precipitate—53 percent in quantity and 68 percent in value—because heavy purchases of United States cotton were made during 1932 and 1933 to replenish foreign stocks at depression prices. Pork products and grains were among the groups of commodities which declined most. The principal factor in the export decline was the reduction of foreign demand, an important measure of which—the index of the quantity of industrial production in all foreign countries—fell by 21 percent between 1929 and 1933.

From 1933 to 1936, when the effects of drought on United States farm exports reached a peak, those exports declined in quantity by a further 28 percent of the 1929 level (making a total decline of 49 percent from 1929 to 1936), although high prices associated with both drought shortages and industrial recovery resulted in a slight rise in export value. We practically ceased shipping a number of grains and pork products for which we are ordinarily among the world's leading exporters. Cotton exports, which were not affected by the droughts, also declined greatly—39 percent—from 1933 to 1936.

DURING this period there appeared in some foreign countries the system of integrated government control of trade, production, and distribution which was probably the most significant development of the decade from the point of view of our farm exports, and which has since been adopted in one form or another by all of the leading foreign purchasers of our farm commodities. By such means as import licensing, exchange control, and subsidy payments, these governments restricted their imports to commodities considered essential and permitted purchases from only such countries considered as desirable sources of supply. An idea of the importance of this development may be gathered from the fact that German imports of American cotton fell, during these three years alone, by more than a million bales annually. In 1933, 87 percent of total German cotton imports consisted of American fiber. In 1936, the proportion was only 31 percent. By 1938, there had been a further reduction to 18 percent. Similar reductions were made in lard and other leading commodities.

Viewed from another angle, these government controls were instrumental in reducing the proportion sent to Germany of total United States farm exports from about 15 percent at the beginning of the decade to less than 5 percent during the last full year before the outbreak of war. The principal other markets in which this type of control developed early in the decade are Japan and Italy.

In late 1937, exports of grains and fruits began to rise rapidly and were followed, with a lag of something over a year, by increased exports of animal products. This result was to have been expected from the return of good weather in the United States. As for grains and fruits, the effect of good crops in the United States was reinforced by that of poor crops abroad, and the quantities shipped during 1938 were well above 1929 levels. Another favorable factor in grains was the

desire of a number of foreign countries to build up stocks of basic foods and feeds as a war reserve. The rise in grains and fruits was partly offset during the 1938-39 season by record low cotton exports due to both industrial depression abroad and the United States Government loan program. Moreover, exporters of the drought-affected products, particularly lard, found it difficult to recapture foreign markets which were being supplied by substitute commodities.

WITH the outbreak of war in 1939, just before the heavy fall movement of farm exports, the picture was again reversed. Cotton exports have been large because of depleted stocks in foreign countries, haste to cover the season's needs before the war at sea might raise transportation costs to prohibitive levels, and United States subsidy payments. Exports of grains, fruits, and pork products, however, have been reduced considerably. Fresh fruits and wheat have been most severely affected.

It is difficult to judge, on the basis of developments during the last 4 months, what the principal longer-time effects of the war on our farm exports will be. If ocean shipping becomes an important problem for the United Kingdom and France, it is possible that United States products may be favored over those from more distant southern-hemisphere sources. Concentrated foods such as grains and dried fruits may be more favored (or less harmed) than fresh fruits and tobacco. Finished products such as meats and cotton cloth may be favored over such alternative items as feeds and raw cotton. The present war is unlikely, however, to create a great demand for our farm products such as marked the later years of the World War.

IMPORTS of the agricultural products which supplement domestic farm supplies fell from a peak just before the beginning of the decade of the thirties to a trough in 1932.

They then rose, under the combined influence of drought and industrial recovery, until by 1937 their quantity was back approximately at the 1929 level. In 1938, with domestic supplies restored in most lines and United States industrial activity again depressed, they fell to a point not greatly above the 1932 low. As the decade ended, they were starting what may become a considerable rise, although probably one of lesser magnitude than that from 1932 to 1937.

Between 1929 and 1932, the quantity of supplementary agricultural imports was cut almost in half (the value fell more than 70 percent). Some of the leading items in the decline were industrial raw materials such as wool, hides and skins, and vegetable oils and oilseeds. The decline was associated with a fall, also of about one-half, in the quantity of United States industrial production.

FROM 1933 to 1937, supplementary imports as a whole almost doubled. They were stimulated throughout most of this period by the recovery of industrial production to within 8 percent of the 1929 level. Increased industrial activity meant increased demand by factories for imported (as well as domestic) raw materials and by workers for imported consumption goods. During the last 3 years of the period, this influence was strongly reinforced by that of the great droughts of 1934 and 1936. In those years we did not produce enough grains and feeds for our own use; so that prices of these normally exported commodities during the corresponding marketing seasons rose well above the world level and attracted net imports. Such imports made up for only a small part of the shortages, but they were unusual enough to cause widespread comment. Animal products were similarly affected, with a lag of a year or more to permit radically changed feed supplies to be translated into radically changed slaughter.

In 1938, industrial recovery and drought shortages were reversed at

about the same time, causing farm prices to fall and supplementary agricultural imports to be cut more than one-third in a single year. The appearance of a substantial measure of industrial recovery during 1939 has caused the quantity of imports to rise again. This development does not

appear thus far to have been affected by the European War. It is unlikely that any substantial effect will soon appear, except in the case of a few commodities for which the belligerent countries may have great need.

R. B. SCHWENGER,
Office of Foreign Agricultural Relations.

County Planning Under Way

A NEW program of comprehensive planning for agriculture through State, county, and community committees of farmers and of trained agriculturists was started about a year ago as the result of a joint agreement between the Land-Grant Colleges and the United States Department of Agriculture.

The purpose of the planning program is to coordinate the numerous action programs in agriculture, to fit them to local conditions and to formulate more effective programs, and to do all this through thoroughly democratic procedures whereby farmers, experts, and administrators working together reach agreements on desirable local adjustments and measures of action.

LOCAL land-use planning committees are now at work in all but one State. Within less than a year after the initial agreement substantial preparatory work had been reported in 830 counties, and some preparatory work is being carried on in many other areas. Prior to July 1 of this year intensive planning work was begun in 317 counties, and this is expected to be completed by next summer. Since July 1 such work has been started in 387 additional counties.

Forty-five other counties have been definitely, and 4 tentatively, selected for work under a unified county program, which is a later stage of planning. It aims to correlate current agricultural programs in the light of the goals agreed upon in the intensive

stage. In many of these counties it was necessary to complete the intensive phase before developing the unified program.

THE FOLLOWING are some of the concrete results which have already come to the attention of the Department:

Worcester and Wicomico Counties in Maryland have each agreed to appropriate \$10,000 for farm drainage work along the Pocomoke River watershed as a result of recommendations by the county agricultural planning committees in these counties.

In Minnesota, farmer backing for a rural zoning enabling act was expressed through the planning committees of two counties. This was the first time that farmers had asked for such legislation and the bill was passed at the last session of the legislature. Through the county planning committees, several of the northern counties are developing plans for putting the zoning act into effect.

In Childress County, Tex., the Prairie State's Forestry Project's planting areas are being relocated in accordance with plans developed by the county planning committee.

IN Beaver County, Okla., the Farm Security Administration uses the planning committee's map of land classification in discouraging continued occupancy of poor land areas and in building the individual farm management plans which form the basis of rehabilitation loans.

Quay County, N. Mex., has developed plans for a wildlife management area to be established in cooperation with the State Game Department. The Farm Security Administration has increased the number of rehabilitation grants, taking farmers off WPA rolls and aiding them to become again self-sufficing. The county, State, and Federal highway officials have accepted recommendations of the agricultural planning committee for the improvement of the secondary road system.

Ross County, Ohio, has organized a special agricultural advisory and coordinating committee as a result of the consideration which the planning committees gave to the problem of coordinating various agricultural programs.

In Box Elder County, Utah, planning has led to the establishment of a soil conservation district and the obtaining of Federal assistance in carrying out the district's program.

CULPEPER, Va., is another county in which a soil conservation district has been established at the suggestion of the county planning committee. A CCC camp has also been established to provide assistance to the district in carrying out its program of soil conservation. Also, at the suggestion of the planning committee, the FSA has designated the county for inclusion in the tenant purchase program. Another project of this committee, aiming toward better coordination of agricultural programs, through having all of the action agencies housed under one roof, is the construction of a new agricultural building at the county seat.

Through negotiations of the planning committee with local relief agencies, an arrangement has been worked out to facilitate shifting of relief clients back and forth between seasonal private jobs and relief, without the danger of their being ineligible for relief when the temporary job is done.

In Transylvania County, N. C., AAA, TVA, FSA, and other agencies have been brought together through the assistance of the county planning committee to develop a coordinated attack upon the agricultural problem in a portion of the county where a large part of the farmers are on some form of relief and living standards are unsatisfactorily low.

COUNTY planning committees also have aided the water facilities program on 109 projects in 15 Western States by assisting in the selection of, and doing educational work for, water facilities areas. Land-use maps prepared by county planning committees have been used in a number of instances as a basis for revised tax assessments, particularly for adjusting the valuations between areas of highly productive land and of areas with lower productivity.

The progress that has been made in organizing and inaugurating the planning program may be some indication of the extent of results to be expected in the future. All except 3 States have developed definite programs which are incorporated in written agreements between the Land-Grant College and the Department.

—ELLERY FOSTER and L. J. DUNKLEY.

Leisure on the Farm?—The average farm workday in the United States was about 1 hour shorter on December 1 than on September 1. Seasonal decline in farm operations was given as the reason. The length of the workday of the farm operator dropped from 11.7 hours to 10.3 hours, while the hired worker's day dropped from 10.1 to 9.3 hours.

Geographic differences in the length of the workday remained about the same. Farm operators in the northern and eastern dairy sections worked longer hours than those in southern and western States. The range was from 12 hours in Maine and Vermont to 9.3 in Mississippi. Hired workers also had a longer day in the North and East than in other sections.

Six Years of Marketing Agreements

MARKETING agreement programs regulate the handling of agricultural commodities in interstate or foreign commerce, and are designed to encourage market stability for farm products and to promote an orderly exchange of goods. The main objectives sought through the Agricultural Marketing Agreement Act, as stated in the declared policy of Congress, are (1) to establish returns to farmers at a level more nearly approaching the level of the prices of things that farmers buy, and (2) to promote the interest of consumers by approaching the parity level gradually and by taking no action which has for its purpose the maintenance of prices to farmers above that level.

The programs are in effect through marketing agreements and orders issued by the Secretary of Agriculture following public hearings and required determinations of industry approval. The agreement is in the nature of a contract between the Secretary and handlers who sign, while the order is in the nature of a regulation and is issued by the Secretary under certain conditions to make the terms of the agreement applicable to all handlers.

BEFORE a marketing agreement can go into effect with an order, the agreement must be signed by handlers of at least 50 percent of the volume of the commodity handled in the prescribed marketing or producing area, and it must be determined that the issuance of the order is approved by at least two-thirds of the producers, by number or by volume of the commodity. A referendum is authorized by the Act for the purpose of determining producer approval, and cooperatives have the privilege of voting for their members.

If the issuance of an order has the necessary producer approval, but the required proportion of handlers fail to sign the agreement, then the order may be issued by the Secretary with the

A means for three-way cooperation of farmers, handlers, and Government in improving selling conditions for a number of agricultural commodities is provided by marketing agreement programs authorized by the Agricultural Marketing Agreement Act of 1937.

More than 45 marketing agreement programs are in effect for milk and dairy products, fruits, vegetables, nuts, tobacco, and hops. These programs directly affect over 1,300,000 producers. The farm value of commodities under marketing agreement programs for fluid milk, exclusive of dairy products, and programs for the various crops approximated \$300,000,000 in 1939.

The accompanying article describes the developments in legal authority for marketing agreements during the last 6 years, the objectives, and the requirements for the issuance of agreements and orders. Next month an article will deal specifically with programs affecting fruits, vegetables, and other crops.—Ed.

approval of the President. All programs in the fruit and vegetable field are under marketing agreements and orders, whereas most of the programs for fluid milk markets are in effect under orders without agreements.

While marketing agreements may be used for any agricultural commodity, orders may be issued only for specified commodities. These are milk and its products, all fresh vegetables, fresh fruits (in the case of apples only those produced in Washington, Oregon, and California), olives and asparagus for canning, tobacco, pecans, walnuts, soybeans, naval stores,

package bees and queens, and hops.

Regulations under marketing agreement programs apply to handlers of agricultural commodities. They do not apply to farmers in their capacities as producers.

ORIGINALLY, marketing agreement programs were provided by the Agricultural Adjustment Act of 1933 which contained only four paragraphs authorizing the Secretary to enter into marketing agreements and to issue licenses. Provisions giving the details, or even the general scope, of a marketing agreement program were lacking. At that time the thought was that the marketing agreement programs might be used as an alternative approach to the production control features of the 1933 act.

A clearer concept of the role which could be played by these programs was developed after some experience. Producers and handlers of agricultural commodities found that these programs could provide the legal basis for voluntary industry efforts to exercise a reasonable degree of control over market supplies and prices. Cooperatives saw in them an opportunity to make group action more effective through an extension of the principles of cooperation. They felt that the marketing agreement programs could provide the capstone to the cooperative movement in agriculture. Others saw in these programs an opportunity for encouraging closer working relationships between producers and handlers of farm products.

THE early programs under marketing agreements and licenses ran into frequent legal complications in which the question of constitutionality was raised, making enforcement through the courts difficult. Following the Supreme Court's decision declaring unconstitutional the National Industrial Recovery Act, Congress in 1935 amended the marketing agreement provisions of the Agricultural Adjustment Act to remove certain features believed to be objectionable

and to give greater definition to the detail and scope of marketing agreement programs. The amendments continued in effect the then existing marketing agreements and licenses; but, in addition to continuing the Secretary's authority to enter into marketing agreements, provided for the issuance of orders instead of licenses in the future. Provisions which could be incorporated in orders were spelled out, and the issuance of orders was limited to specified commodities.

The 1935 amendments gave definite recognition to the relationship of producer cooperatives to the marketing agreement programs, and, among other requirements, provided for a determination of producer approval before an order could become effective with or without a marketing agreement. Provision was also made for Federal-State cooperation in the development and administration of marketing agreement programs. Arrangements for joint administration of Federal-State programs have been worked out between the Federal Government and eight States.

NEW legal difficulties for the marketing agreement program arose after the January 6, 1936 decision of the Supreme Court against the production control and processing tax features of the Adjustment Act. Several lower courts differed as to the separability of the marketing agreement provisions from the production control features which had been declared unconstitutional. To meet this situation, Congress passed the Agricultural Marketing Agreement Act of 1937 which reenacted, amended, and supplemented the marketing agreement provisions of the Agricultural Adjustment Act as amended in 1935.

Since the Marketing Agreement Act was passed, enforcement of the program has been supported either by rulings of lower courts or through appeals to higher courts. The most significant legal development took place on June 5, 1939 when the

Supreme Court upheld the validity of orders regulating the handling of milk in the New York and Boston markets and confirmed the constitutionality of the Marketing Agreement Act under which the two orders were issued.

DECISIONS of the courts since the Marketing Agreement Act went into effect have built up a backlog of legal precedent which makes possible more expeditious handling of enforcement cases. Also, in the 6 years the marketing agreement programs have been available, much has been learned

concerning possibilities and limitations of this new approach to the marketing problems of farmers. The policies which are being followed in the development and operation of these programs have grown out of practical operating experience. Today finds the marketing agreement programs taking their place as permanent machinery which is available to farmers as an aid to improving marketing conditions.

NATHAN KOENIG,
*Division of Marketing and
Marketing Agreements.*

Conservation in the 1940 AAA Program

MORE soil conservation for every dollar spent for soil-building payments is a major aim of the 1940 AAA program which has been drafted in final form and which farmers are now ready to put into use. This aim is in line with the policy laid down by Secretary Wallace in November that additional measures be taken in 1940 and succeeding years to step up the efficiency of all the conservation efforts of the Department's programs. To carry out this aim in the AAA program, the credits for various soil-building practices now place more emphasis on those soil-building practices that are not carried out normally on a large proportion of farms. Simultaneous with this adjustment in soil-building credits, acreage goals and payment rates were set.

Farmers working under past programs have kept their plantings of soil-depleting crops in line with good soil-conservation practices and with current market requirements. They have also been building up reserves against emergencies.

The acreage taken out of soil-depleting crops has not been idle acreage. It has been used to make farming more profitable. In many instances farmers are producing soil-depleting crops more efficiently on a smaller acreage. This

means that they have more acres for legumes and grasses which furnish feed and also have the added virtue of improving the soil.

NEW seedings of soil-conserving crops have averaged about 30 million acres annually, and for these seedings soil-building payments were made. However, not all of these seedings needed the incentive of soil-building payments. Farmers regarded their value as feed and as soil-improvers as sufficient to warrant their use. It was this circumstance that made it possible for the Agricultural Adjustment Administration to adjust the credits for soil-building practices, in order that the payments could be used to better advantage in obtaining improved farm practices.

Accordingly, the 1940 program reduces the credit for carrying out practices that are carried out normally on a substantial number of farms. This leaves available more funds to serve as an incentive for practices not carried out normally. Thus the credit for seeding alfalfa is reduced from two units per acre to one unit, each unit being the equivalent of \$1.50. Credit for seeding annual ryegrass, annual sweet clover, biennial legumes, perennial legumes, perennial grasses and

legume and grass mixtures, has been reduced from one unit per acre to one-half unit.

Similar reductions have been made in the credit given for other practices whose efficiency in getting results above those normally expected is comparatively low. In this way payments may better serve to get conservation over and above the results obtained normally from the incentive of sound farming.

WHILE the total acreage goal for soil-depleting crops for 1940 of 270 million to 285 million acres is the same as that for the preceding year, some changes have been made in the special goals, notably those for corn and wheat. The corn goal is 88 million to 90 million acres, as compared with the 1939 goal of 94 million to 97 million acres. This reduction was made because of large supplies of corn and because of increased acreage yields resulting from the use of hybrid corn seed, tractors, and the tendency under the program to concentrate on the better corn land.

The acreage goal for wheat is 5 million acres larger than that for 1939. The goal for 1940 is 60 million to 65 million acres. Increased acreage allotments are possible because of the adjustment made in 1939 in wheat supplies. As in the case of corn, the change in the wheat acreage allotment was made to comply with the formulas

established in the Agricultural Adjustment Act of 1938. The rice goal was increased, and the goals for several types of tobacco were reduced, particularly flue-cured tobacco, supplies of which are large.

Payments on the normal yield of allotted acreages of corn, and Burley and flue-cured tobaccos will be higher than those under the previous program as the result of the decrease in acreage goals and allotments. Lower rates of payment for rice and wheat reflect larger allotments.

COMPARISON of the rates for 1940 with those of 1939 is as follows:

Payment to be on normal yield of 1940 acreage allotment	1940 payment rate	1939 payment rate
Corn, per bushel.....	10¢	9¢
Cotton, per pound.....	1.6¢	1.8¢
Wheat, per bushel.....	9¢	17¢
Rice, per 100 pounds.....	6.5¢	9¢
Peanuts, per ton.....	\$2.50	\$3.00
Potatoes, per bushel.....	3¢	3¢
Tobacco (per pound):		
Flue-cured.....	1¢	.8¢
Burley.....	1¢	.8¢
Fire and dark air-cured.....	1.2¢	1.2¢
Type 41.....	.6¢	1.0¢
Cigar filler and binder (other than types 41 and 45).....	1¢	1.0¢
Georgia-Florida Type 62.....	1.2¢	1.5¢
Commercial vegetables, acre.....	\$1.50	\$1.50
General soil-depleting crops:		
In area A (surplus feed crop area), per acre.....	\$1.10	\$0.99

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Leases for Farm Tenants

NEARLY half of all United States farmers are tenants or sharecroppers, and approximately 1 million of these families move every year. Probably another million families have little or no promise of continued tenure.

In Georgia 76,250 tenant families, or 30 percent of all Georgia farmers, had been where they were less than 1 year, according to the Agricultural Census of 1935. In Mississippi 83,762 tenant families, or 27 percent, were in

that position; in Oklahoma, Arkansas, and Alabama, 26 percent; in Texas, 24 percent; in South Carolina, 22 percent; in Louisiana, 20 percent; in Tennessee, 19 percent; and in North Carolina, 18 percent. Mobility of tenants and sharecroppers in a number of other States was only slightly less.

ALL PEOPLE within a community, including landlords, suffer the ill effects of this annual shifting of families from farm to farm, and in many

cases from community to community. A survey in Oklahoma several years ago revealed that the cost of moving to the average Oklahoma tenant was about \$50. A more recent study in Wisconsin reveals that the average Wisconsin tenant incurs a cost of about \$150 per move and that the cost to the Wisconsin landlords is at least as much as the cost to the tenants.

Some tenants move to farms of their own, some to better farms or better communities, and some to obtain better school or church advantages. Some move for better markets or better roads, for more healthful locations, and for various other good reasons. But most of the moving of tenants and sharecroppers is a vain search for better conditions, without advantage or benefit to tenants, to landlords, or the community.

PEOPLE are reluctant to admit that ownership of the land may not be within the reach of every tenant and sharecropper. Yet there is nothing in the picture at present which seems to give promise that the average tenant or sharecropper may reasonably hope to become a farm owner within his lifetime. The money required to offer ownership to all of the 2,865,155 tenants and sharecroppers, at the conservative figure of \$5,000 each, would total more than 14 billion dollars. Moreover, it is generally agreed by informed persons that many tenants and sharecroppers do not have the managerial ability, initiative, and self-reliance to own and operate farms so as to produce a living and make the farms pay out over a period of years.

IF FARM ownership is within the reach of only the more capable and more self-reliant farmers, then the most difficult and most important phase of the problem is in devising effective means of providing security of tenure for those who will continue as tenants or sharecroppers. Thus, the approach to the problem is two-fold: (1) Every possible assistance must be given to capable and ener-

getic tenants in acquiring and retaining ownership of farms; (2) definite measures must be developed and applied to afford reasonable security on the land for those who are not able to achieve farm ownership, or who must wait a number of years for the opportunity.

Improvement in the tenure system to afford greater security on the land for tenants and sharecroppers may prove to be one of the soundest and most effective means of advancing them toward farm ownership.

FARM tenancy is not necessarily bad nor is investment ownership of farms necessarily objectionable. So long as there are farm families who desire and need to make their living by tilling the soil and who are unable to buy farms of their own it is necessary that others own farms which can be made available to them. The public interest is served so long as the terms and conditions of renting are equitable and fair, and so long as security and stability of tenure are afforded to tenant and sharecropper families.

Important as this human element is, however, it is not the whole story. There is the problem of soil erosion. It is virtually impossible to get good soil conservation measures on farms which change hands every year. Tenants on such farms have to get everything they can out of the farm in the 1 year to provide a living for themselves and their families. And the owners of these farms are, and almost have to be, concerned more with getting a yearly return on their investment than in conservation of the soil resources for the future.

ASSUMING that everything possible will be done to aid capable tenants in achieving and retaining farm ownership, consideration must be given to ways of providing security on the land for those who must continue as tenants or sharecroppers. For the time being, at least, the chief hope for improvement and for ultimate solution must be based upon a care-

fully planned educational program which will enlist the joint cooperation of landlords and tenants and will stimulate widespread and intelligent public consideration. Corrective State legislation will largely grow out of such an educational program.

The approach must be definite and concrete. Lease forms of a simplified and understandable type and equitable to both parties may serve as the most effective tool with which to undertake improvements in the tenure system and may provide the avenue through which to stimulate public discussion and thinking. The most direct and practical approach to the problems and relationships of an individual landlord and his tenant is through the process of agreeing upon and signing a written lease.

A GOOD lease should conform to the following points: It must be in writing, in clear and understandable language, and in good-sized type; it should be as fair to one party as the other; important details with reference to the operations of the farm, the contributions of each party and the rates of rent, must be outlined clearly and unmistakably; it should give the tenant an opportunity to make a good living on the farm; definite provisions with regard to the maintenance, repair, and improvement of the farm must be set forth; finally, it should contain an agreement between the parties that they will arbitrate any differences or disputes.

Practically all of the tenant farmers who are clients of the Farm Security Administration have written leases instead of vague oral agreements, and about 25 percent of these leases are for more than 1 year. Leases were prepared especially for use by re-

habilitation clients of the FSA but they are equally useful in meeting the needs and conditions of other tenants and landlords.

DURING the past year, the farm tenure problem and leasing procedure have been discussed in regional, State, and county conferences of agricultural workers and local citizens the country over. Landlords and tenants in many counties have sat down together in conference, discussed common problems and needs, and considered measures to improve their leasing arrangements and relationships.

To an increasing extent landlords and tenants are requesting assistance in their leasing arrangements. In the past year more than 8,000 sets of improved lease forms and related materials were distributed by the Department of Agriculture upon direct request from landlords and tenants. A much larger number of requests for lease forms and for assistance in leasing procedure was received by county, State, and regional offices of the FSA and of other agencies of the Department. More than two-thirds of these requests for assistance came from landlords.

More recently farm tenure and tenure improvement have been made a part of the general approach to Land Use Planning and a part of the work of State and County Land Use Planning Committees. Plans are being formulated by which it is expected that all action agencies of the Department of Agriculture, working with and through State committees and State institutions, will join in a unified approach to the tenure problem.

DOVER P. TRENT.

Crop Insurance: One out of every four farmers who insured their 1939 wheat production under the Federal "all-risk" crop insurance program has received an indemnity to make up for unavoidable crop loss. Crop insurance was in force on approximately 7,600,000 acres in 31 States. The wheat yield in these States as a whole was 10 percent below the average yield of the insurance base period, 1926-35. Crop losses were particularly severe in Nebraska, Kansas, Oklahoma, Texas, and South Dakota.

The World's Largest Produce Market

NEW YORK CITY is the world's largest market for fresh fruits and vegetables. Its annual supplies, arriving by all forms of transportation, average about one carload a minute for the daylight time of every working day in the year. The 212,000 carloads received last year came from 42 States and many foreign countries. Nearly one-eighth of the total commercial production in the entire United States finds its way to that one great market, and values established there influence the prices of hundreds of thousands of carloads sold in other parts of the country. The New York market is in every sense of national importance.

Three-fourths of the total supply is handled through the great Washington Street market section of Lower Manhattan. The other fourth consists principally of receipts at farmers' markets, direct receipts at chain store warehouses, and commodities such as potatoes, watermelons, and juice grapes, which are mostly handled in separate, specialized markets.

THE Washington Street market is located along the lower west side of the Island of Manhattan, in the very shadow of the great skyscrapers of the financial district. Not for any particular reason is it located on some of Manhattan's highest priced land—the market has just always been there, or at least, for more than a century. For 12 blocks it extends along either side of Washington Street—one of those deep and narrow canyons built by man on this densely populated island. Three modern motortrucks side by side fill Washington street from curb to curb, and with one parked at either side, there is only enough space for one truck at a time to move through the center lane. Cross streets are but little wider. Old store buildings open from the sidewalks—and open from only one narrow street. Built solidly against the buildings of the next street, they have no rear

Farmers and shippers have long complained of conditions in the fruit and vegetable market of New York City. Many of its facilities are antiquated and seriously outgrown, resulting in wasteful methods and excessive costs in the handling of the present day volume of supplies. The substantial savings which could be made would benefit producers throughout the nation, as well as consumers in that great metropolitan area. This article describes some of the evils and shortcomings of the market which are most in need of correction.—Ed.

entrances or loading platforms in these blocks.

Each night there comes to these stores a long procession of huge over-the-road motortrucks, bringing produce from the entire Atlantic seaboard, from New England to Florida. Each night come the contents of hundreds of railroad cars, hauled by other trucks from nearby unloading piers or from distant team tracks—for Washington Street has no direct rail connections with the outside world whence comes this endless stream of supplies. Each night there come, too, the cargoes of many ships, berthed at their piers along the rivers. Through this Lower Manhattan market there is handled each working night an average of more than 500 carloads of fresh fruits and vegetables, arriving by rail, truck, and boat.

THEN come the trucks of thousands of buyers, to load their purchases and rush them away to stores, push carts, and fruit stands before they are wilted by the morning sun. Trucks, trucks, everywhere—by actual count a total of between 3,000 and 4,000 coming and going during each night,

of which 1,200 to 1,350 are in the market area at any one time between midnight and 7 a. m. With most streets only 30 feet wide, the trucks must stand parallel to the curb, and only about 400 can be parked in the spaces adjacent to produce stores. The other 900 must stand in long lines of waiting traffic, or are parked on side streets and back streets.

Deliveries from stores to trucks are made chiefly by porters using small hand trucks. Along crowded sidewalks, among towering stacks of produce, these hand trucks weave in and out. At the corner they are wheeled off the curb with a thud, and then jiggled along cobblestone streets, loaded with the tender and highly perishable fruits and vegetables which have been handled so carefully all the way from farm or orchard, perhaps 3,000 miles away, that they might arrive at the market in good condition.

Relics of bygone days, fronting on narrow streets, with no loading or unloading platforms, these old store buildings are in a sorry plight when called upon to act as terminals for fleets of modern motortrucks. The city's population has grown manifold since the market was first established. Year-around supplies come from scores of distant producing sections. Shippers have streamlined their handling and packing methods. Hours and days have been cut from transportation schedules between shipping point and market.

Speedy trucks and arterial highways assure quick delivery from the market. But the market itself has failed to keep pace with modern developments. Supplies must be moved through the same narrow streets to and from the same store buildings as they were more than half a century ago. Hundreds of motortrucks must stand and wait while their loads are laboriously transferred by hand. Buyers, salesmen, truck drivers and helpers—all must spend long hours of tedious and costly delays, for delays are costly indeed in city distribution of perishable food products.

THE first great difficulty is of getting supplies into the market. Developing in an old part of the city, without plan or design, the market is made up of widely scattered and unrelated facilities. With no rail connection, cars can get no nearer than the river front, where they must be unloaded from ferries, or car floats, onto one of seven piers, or they may be placed on team tracks several miles distant and their contents hauled by truck to Washington Street. Steamship cargoes are unloaded at many other piers. Some products are sold and delivered from the piers, and others are hauled to the Washington Street stores to be sold. Buyers must visit several unloading points to obtain a complete list of products. Driveway space for trucks and teams is limited on the piers, and deliveries are slow and costly.

The total annual bill for direct deliveries from the piers, by the methods and charges known locally as "O. C." and "Pierhead delivery," is about \$800,000. Hauling between piers, team tracks and Washington Street stores, and from one store to another, adds up to the staggering sum of \$3,280,000 annually—just to assemble supplies within the Lower Manhattan market. But "cartage" (as it is still known in New York from the old horse-and-cart days) is not the only cost of moving these supplies through the market. In addition, there is the hire of all the porters who carry the produce or push it on hand trucks between the stores and the waiting motortrucks. This amounts to another \$1,340,000 in a year.

TOTAL annual cost, then, of just the physical handling, hauling, and delivering in the Lower Manhattan market amounts to \$5,420,000. Much of this is due to the scattered unloading and delivery points, requiring an immense amount of hauling to concentrate supplies for sale in the market area. If sales platforms and stores were arranged so that incoming supplies could be unloaded directly at the place

where they are to be sold, much of this hauling would be eliminated. If streets were wide and sales platforms and stores had both front and rear entrances, so that trucks could back up to the sales floors and then get away promptly, instead of parking parallel to sidewalks in narrow congested streets, the amount of handling would be greatly reduced.

This would not only save a large part of the annual cash outlay for hauling and handling. It would mean a great saving in time—an important factor in the distribution of fresh fruits and vegetables. Of equal importance would be the lessened deterioration of these perishable food products, resulting from decreased handling, bruising, and exposure.

Other savings might be made in methods of doing business. Land values are high here in the shadow of the skyscrapers, but efficient distribution of fruits and vegetables requires lots of space. Thousands of tons must be handled in a few hours. Space must be provided not only for the display and sale of the products themselves, but also for thousands of motor trucks and other vehicles which transport them. Most of the business must be done on the ground floor, so it is essentially a one-store industry. Since the market cannot be built high in the air like a department store, or like the office buildings nearby, nearly all of the overhead costs must be carried by the ground floor. Therefore, high land values will inevitably mean either high rental charges on the industry for supporting the large capital investment, or inadequate space and facilities for the proper handling of perishables.

WHY is it that these produce markets remain in the same old cramped, inadequate, and obsolete quarters in so many of our cities? Other industries move as the cities grow, but seldom does the fruit and vegetable industry unless compelled to move by outside forces, as when a market area is taken over by a city

for other uses. Perhaps the nature of the business itself is partly responsible. Most wholesalers of groceries, or shoes, or hardware, for example, are also located in certain sections of the city, much in the same way as are produce merchants. A few of the wholesalers of these commodities may decide that their location is outgrown or that they could do better in some other part of town, but the others prefer to remain where they are. The methods by which these products are sold and delivered may be such that these few dealers can move to a new location, still attract their buyers, and eventually establish a new wholesale district.

But for the distribution of fruits and vegetables, buyers must go to market during the night or early morning and rush their supplies back to their stores for that day's business. Speed is urgent. Buyers wish to make purchases as quickly as possible. A wholesaler who is off the beaten path just does not get customers, and a few firms cannot step out by themselves into a new location. All have to go together, or suffer the serious consequences of a split market. The greater the number of dealers, the greater the difficulty of getting them to agree to any program of action.

A complete, centrally located produce market in New York, with adequate space and modern facilities, built on land of moderate cost, could effect savings of several million dollars in the annual bill for distribution of fruits and vegetables, over and above the amortization of construction costs. Conditions in the market are of very real concern not only to local wholesalers, jobbers, and retailers, but to many thousands of growers throughout the country, millions of consumers in the New York area, railroads, trucking companies, and others. All these interests have a large stake in the market, a definite interest in its efficient operation, and a real concern in efforts to improve upon existing conditions.

W. CALHOUN.

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A Brief Summary of Economic Conditions

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CONDITIONS affecting the domestic demand for farm products are less favorable than at the beginning of this year. * * * Prices of wheat and cotton have declined from the recent highs, but the January average for all farm products was higher than a year earlier. It is expected that cash farm income in the early months of 1940 will exceed income in the same months of 1939, but the purchasing power of farm products will continue below the pre-World War average. Revisions of estimates put cash income from marketings, Government loans, and Government conservation payments at 8.5 billion dollars total for 1939, compared with 8.1 billion in 1938. * * * Prices of dairy products continue at relatively high levels. Producers of other livestock products and of livestock are confronted with diminishing commodity-feed price ratios. This is expected to increase the marketings of livestock in coming months and to halt the recent expansion in livestock production. * * * The 1940 pig crop probably will be smaller than the 1939 pig crop.

Commodity Reviews

DEMAND: Upturn Halted

Industrial conditions affecting the domestic demand for farm products turned downward in January, after an uninterrupted rise of 7 months and a general upward trend since June 1938. The rapid increase of industrial production, employment and consumer income, which was accelerated by the outbreak of war, could not have continued indefinitely, and we have reached the period in which some adjustments will be necessary before the improvement can be resumed.

Many of the large orders which were received by industrial firms following the outbreak of war in Europe have been filled, and new orders have not come in sufficient volume to maintain the high rate of production which prevailed during the last part of 1939, and which carried industrial activity to a level higher than that attained in 1929. Many firms have considerable quantities of steel and other semi-finished and raw materials on hand, and will want to work these up into finished products before placing new orders. Since, on the average, industrial production increases during the first part of the year, this means that activity will be declining against the usual seasonal trend, and seasonally adjusted measures of output probably will move downward for some time into 1940.

Consumer income, however, is still feeling the effects of the increased business activity in the latter part of 1939, and these effects may carry over sufficiently to prevent any important decline in consumer purchasing power. Moreover, changes in the buying power of consumers sometimes are rather slow in being translated into changes in the consumer demand for farm products. Thus, the demand for farm products such as eggs and dairy products did not respond quickly to the improvement in consumer purchasing power in the last half of 1939,

and the effects of the latter will tend to support the demand for and prices of these products during the first half of 1940. Nevertheless, some weakness may occur before the downward swing is over.

Later in the year, a resumption of the general improvement of economic conditions in the United States is indicated, as industrial firms come back into the markets for raw materials and semifinished products, and merchants resume buying, following the depletion of inventories. Hence, despite the unfavorable aspects of the present situation, domestic demand conditions during the year as a whole should prove to be more favorable than in 1939.—F. L. THOMSEN.

EXPORTS: Decline

The European War has had relatively little effect upon export demand for farm products as a whole, but it is becoming more apparent as time goes on that the net result during the first year, at least, will be somewhat unfavorable. Exports of farm products except cotton have had a declining trend as the war has continued. The belligerent nations are making every effort to obtain their food requirements from countries other than the United States, reserving their dollar exchange for the purchase of industrial products which cannot be obtained except in this country. Later, they may have to turn to us for a larger proportion of their supplies, but there appears to be no immediate prospect of such a development. The war, however, has contributed to the rise in wheat prices, partly by raising the "ceiling" represented by Canadian wheat prices, and also has helped to bring higher cotton prices as a result of the scramble of various countries to build up their stocks of cotton before ocean transportation conditions made it more difficult to obtain shipments from this country.—F. L. T.

PRICES: Higher

The national average of prices received by farmers was 3 points higher on January 15 than in mid-December—99 percent of the 1910-14 pre-World War level. This compares with 94 percent in January a year ago. Prices of wheat and cotton advanced sharply in late December. Most farm prod-

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power per unit of farm products ¹
1939			
January.....	94	120	78
February.....	92	120	77
March.....	91	120	76
April.....	89	120	74
May.....	90	120	75
June.....	89	120	74
July.....	89	120	74
August.....	88	119	74
September.....	98	122	80
October.....	97	122	80
November.....	97	122	80
December.....	96	122	79
1940			
January.....	99	122	81

¹ Ratio of prices received to prices paid.

ucts except hogs, chickens, and eggs were selling higher in mid-January this year compared with last.

Prices paid by farmers averaged the same on January 15 as in mid-December—122 percent of the 1910-14 pre-World War level. This compares with 120 percent in January a year ago. The ratio of prices received to prices paid was 81 percent in January, compared with 79 percent in December, and with 78 percent in January a year ago. This means that the purchasing power of farm products in January was 19 percent below the 1910-14 average of 100.

INCOME: 8.5 Billion Dollars

A revised estimate of cash farm income from marketings, commodities placed under Government loan, and Government conservation payments puts the total for 1939 at 8.5 billion dollars (previous estimate was 8.3 billion dollars), compared with 8.1 billion in 1938, with 9.1 billion in 1937, and 8.5 billion in 1936.

Income from marketings and Government loans was about 112 million dollars larger in 1939 than in 1938. Total for crops was 3,238 million dol-

Prices of Farm Products

Estimates of average prices received by farmers at local markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	January 1910-14	January 1939	December 1939	January 1940	Parity price, January 1940
Cotton, lb.....	12.4	12.2	8.3	9.7	10.1	15.87
Corn, bu.....	64.2	58.9	45.1	50.3	53.2	82.2
Wheat, bu.....	88.4	88.4	57.1	82.4	84.5	113.2
Hay, ton.....	11.87	11.87	6.79	7.71	7.90	15.19
Potatoes, bu.....	69.7	64.2	64.6	70.8	74.0	86.5
Oats, bu.....	39.9	39.0	26.3	34.7	36.3	51.1
Soybeans, bu.....	(1)	(1)	7.72	9.7	1.01	.....
Peanuts, lb.....	4.8	4.6	3.4	3.4	3.6	6.1
Beef, cattle, cwt.....	5.21	5.04	6.68	6.85	6.94	6.67
Hogs, cwt.....	7.22	7.03	6.96	5.03	5.18	9.24
Chickens, lb.....	11.4	10.8	14.0	11.7	12.0	14.6
Eggs, doz.....	21.6	28.0	18.8	20.5	18.3	29.9
Butterfat, lb.....	26.3	29.2	25.2	28.5	30.0	35.6
Wool, lb.....	18.3	18.5	20.0	27.5	28.1	23.4
Veal calves, cwt.....	6.75	6.78	8.30	8.41	8.95	8.64
Lambs, cwt.....	5.87	5.70	7.33	7.38	7.57	7.51
Horses, each.....	136.60	133.70	82.00	77.10	78.30	.....

¹ Prices not available.

² Revised.

³ Adjusted for seasonality.

lars compared with 3,126 million in 1938; total from livestock and livestock products was 4,473 million dollars, about the same as in 1938.

Principal crops showing increases compared with 1938 included wheat, corn, truck crops as a group, and potatoes. Smaller income was realized from cotton and tobacco. Income from meat animals was larger in 1939 than in 1938, but returns from poultry and eggs, and dairy products were smaller.

Year	Income from marketings and loans	Income from Government payments	Total
1939.....	\$7, 710, 981, 000	\$807, 065, 000	\$8, 518, 046, 000
1938.....	7, 599, 442, 000	482, 221, 000	8, 081, 663, 000
1937.....	8, 744, 125, 000	368, 899, 000	9, 111, 024, 000
1936.....	8, 212, 041, 000	287, 252, 000	8, 499, 293, 000

WHEAT: Prices Down

Wheat prices declined in January on reports of general snows in the winter wheat areas and prospects that business conditions over the near term will react from the sharp rise in the last few months of 1939. Prices in coming months will depend largely upon overseas sales of Canadian wheat, political developments in Europe, general business conditions, and the disposition that farmers make of wheat now under loan.

(The Commodity Credit Corporation announced in January that none of the extended loans secured by resealed 1938 wheat stored on farms would be extended beyond their maturity date of March 31, 1940. About 3.5 million bushels of such wheat is stored in 12 States. The Corporation announced also that all 1939 wheat loans mature April 30, 1940, and that it is not contemplated any of the loans will be extended beyond that date except in 10 States where about 23 million bushels of wheat under these loans is stored.)

Wheat prices in the United States continue high, relative to prices in other countries, since the domestic crop in 1939 was only moderately above annual domestic requirements,

large quantities of wheat have been withheld from the market, and the 1940 crop probably will be smaller than domestic disappearance. Prices of Hard Winter wheat c. i. f. Gulf ports were 28 to 30 cents above export parity in late January, whereas prices of domestic spring wheat at Buffalo were only about 8 cents lower than approximately the same quality of Canadian wheat, c. i. f., duty paid, at Buffalo.

COTTON: Prices Lower

Cotton prices declined from the comparatively high levels reached toward the end of 1939, and on January 31 averaged 10.44 cents for Middling $1\frac{1}{8}$ inch in spot markets. This was nearly 1 cent below the $2\frac{1}{2}$ -year high reached in mid-December. In the last week of January 1939 the average was just under 9 cents. The decline in January this year was part of a general softening of commodity prices.

Domestic mill consumption declined slightly in January but was at an unusually high level compared with other recent years. Mill consumption in December had totaled 653,000 bales, compared with 566,000 bales in December 1938, and with 464,000 bales average for December in the 10 years 1928-37. The 3,312,000 bales consumed from last August through December established a new high record for that period. A decline in domestic business activity may restrict mill consumption during the next few months.

Cotton mill consumption in a number of European countries has continued at unusually high levels, largely on the strength of government orders. United States exports of cotton totaled nearly 3,800,000 bales during the period August 1 to January 25, compared with 2,165,000 bales in the like period a year earlier, and with 3,790,000 bales 2 years ago. Sales and deliveries of raw cotton under the export program totaled nearly 5,900,000 bales—through January 30, when the export payment of 0.20 cents per pound on raw cotton was discontinued.

FEED: Prices Up

Prices of feed grains and high protein feeds are higher this winter than last. Strengthening factors have been the smaller supply per animal on farms this season than last, the comparatively high level of wheat prices, and the active sealing of 1939 corn.

Farm and commercial stocks of corn totaled 1,977 million bushels on January 1, stocks held by the Government in steel bins and country elevators totaled about 75 million bushels, and stocks sealed by farmers in country elevators were about 14 million bushels—making the total about 2,066 million bushels. This compares with total estimated stocks of 1,872 million bushels on January 1, 1939. Total disappearance of corn during October–December 1939 was about 1,116 million bushels, compared with 1,053 million bushels during the like period in 1938.

United States exports of corn have declined since the October peak, and totaled in November a little more than 1 million bushels as contrasted with about 6 million bushels in November 1938.

HOGS: Low Prices

The average farm price of hogs on January 15 was \$5.16 per 100 pounds, and the average farm price of corn was 53 cents per bushel. This price relationship is unfavorable for hog production, and suggests—in conjunction with the December pig crop report—that production of pigs will be smaller in 1940 than in 1939.

The 1939 pig crop—estimated at 84.3 million pigs—was the largest in 16 years of record. It consisted of a spring crop of 52.3 million pigs, and a fall crop of 32 million. (The fall crop was a little larger than had been indicated earlier in the season.) Of the total 1939 crop, approximately 57.8 million pigs were produced in the Corn Belt, as compared with 48.0 million in 1938. The major part of the increase was in the Western Corn Belt.

Reports from farmers in December, and supplemental information, indicated for the entire country about the same number of sows to farrow this spring as last—about 8.6 million. (The Eastern Corn Belt was the only section of the country showing a prospective increase.) Continuation of an unfavorable hog-corn price ratio would cause farmers to keep fewer sows for spring farrow than was indicated in December.

Inspected hog slaughter in December—5.2 million head—was the largest for that month since 1931. Marketings in the remainder of the winter and in the spring and summer will continue to be larger than in the like period last year. On the favorable side is the fact that domestic consumer demand is better than at this time last year, and that for the entire year a better export demand for hog products is in prospect. Exports of pork and lard were larger in 1939 than in 1938.

CATTLE: Smaller Returns

Cattle feeding will be less profitable this winter and spring than last. Prices of the better grades of cattle are lower than at this time last year, and feed prices are higher. The Corn Belt had 12 percent more cattle on feed this January 1 than last, and the Western States 19 percent more. The total number on feed this January 1 was the largest in recent years.

The increase in cattle on feed will be reflected in larger marketings of grain-fed cattle in 1940 than in 1939—especially in the first half of the year. But the increase in nearly months probably will be more in short-fed than in long-fed cattle. (Corn Belt feeders reported in January they expected to market a larger proportion of cattle January through April, and a smaller proportion after April, this year than last.)

Smaller marketings of cows and heifers are in prospect during the first half of 1940 as compared with the like period in 1939. But the decrease may not be enough to offset the increase in

marketings of fed cattle, and total cattle slaughter may equal or exceed the total in the corresponding period of last year. The lower grades of slaughter cattle have been selling recently at about the same prices as a year earlier.

Inspected cattle slaughter totaled 9,446,000 head in 1939, or about 3.5 percent less than in 1938. Average weight was slightly heavier than in 1938, and the total live weight was only about 1.5 percent smaller than in 1938. Inspected calf slaughter totaled 5,264,000 head in 1939, or about 4 percent less than in 1938.

LAMBS: Near Record

Approximately 6.0 million head of sheep and lambs were on feed January 1 in the principal feeding States, compared with 5.8 million a year ago, 6.0 million 2 years ago, and 5.6 million average in the 5 years 1933-37. The number on feed this January 1 was the second largest on record.

Of the total on feed this January 1 about 3.3 million head were in the Corn Belt, and 2.6 million in the Western States. The number in the Corn Belt was about 5 percent larger than at the beginning of 1939. In the Western States the increase was only 15 thousand head, and it is likely that during the remainder of the winter feeding season the number on feed in these States will be smaller than in 1939.

Marketings of fed lambs during the remainder of the fed lamb marketing season—through April—will be about the same as in the corresponding period last year, with supplies larger through February, and smaller in March and April. Most of the lambs fed in the Corn Belt usually are marketed before mid-winter. Most of the marketings in March and April are from Western States.

Total slaughter supplies of sheep and lambs may be larger this spring than last, since increased marketings of yearlings and early lambs are expected from Texas. Prices of slaughter lambs in December and early January were

a little higher than a year earlier, due chiefly to stronger consumer demand and higher prices for wool.

WOOL: Small Supply

Mill consumption of wool continues at a high level, domestic stocks of wool are running low, and imports of wool are increasing. United States buyers purchased considerable wool in South African and South American markets in the last four months of 1939, and in January orders were being placed in Australia for fine and one-half blood wools. Much of the imports will supplement the small domestic supply to be carried over into the new marketing season that begins on April 1.

The domestic supply situation is somewhat similar to that of early 1937, when stocks were small and imports and mill consumption were relatively large. (The April 1, 1937, carry-over of domestic wool was the smallest in several years, but by reason of relatively large imports in the first quarter of the year, the total supply of foreign and domestic apparel wool held by dealers and manufacturers was larger on April 1, 1937, than on April 1, 1936.)

Prospects for mill consumption after the first quarter of this year are not clear at this time. A pertinent observation, however, is that in recent years there has been a decided tendency for consumption to decrease following a year of increasing consumption. Consumption in 1939 was a near record.

OILSEEDS: Prices Higher

Prices of domestic oilseeds—cotton seed, soybeans, and flaxseed—advanced from September through December to levels higher than in December 1938. Gains were registered even though the total domestic supply of fats and oils is the largest on record, and supplies of feed grains and other feedstuffs are relatively large.

Cottonseed: Production of cottonseed totaled 5.2 million tons in 1939, compared with 5.3 million tons in

1938, and with 6.1 million tons average for the ten years 1928-37. Prices of cottonseed at Dallas in December averaged \$27.60 per ton, compared with \$23.00 a year earlier. Cottonseed oil prices were lower in December 1939 than in December 1938, but prices of cottonseed cake and meal, and of hulls and linters, were considerably higher.

Soybeans: Production of soybeans totaled about 87 million bushels in 1939, compared with 63 million bushels in 1938, and with 22 million bushels average for the 10 years 1928-37. No. 2 Yellow soybeans at Chicago averaged \$1.15 per bushel in December, compared with 81 cents in December 1938. A strengthening factor has been the prospect of record exports of soybeans to European countries formerly supplied by Manchuria. Prices of soybean oil averaged about the same in December as a year earlier, but prices of soybean cake and meal were considerably higher, reflecting improvement in the demand for feeds.

Flaxseed: Production of flaxseed totaled 20.3 million bushels in 1939, compared with 8.2 million bushels in 1938, and with 11.9 million bushels average for 1928-37. No. 1 flaxseed at Minneapolis averaged \$2.07 per bushel in December, compared with \$1.90 a year earlier. The price of flaxseed apparently has been influenced largely by increased prices of linseed oil, which were nearly 20 percent higher in December (at Minneapolis) than a year earlier. Important factors in the higher linseed oil prices include increased building activity and relatively strong demand for paints, and restricted exports of tung oil from China.

TRUCK CROPS: Freeze

Freezing weather in late January destroyed vast areas of truck crops in the South. Market prices of vegetables rose sharply in consequence. Practically all tender vegetables were destroyed in Florida, snap beans, beets,

and cabbage were damaged in Texas, cabbage was destroyed in Alabama.

The winter crop of snap beans in Florida had been indicated in early January to be about 16 percent larger than a year earlier, off-setting to some extent the short fall crop. Texas was reported as having an unusually large crop of beets this season, about 13 percent more than last season. The early cabbage crop, affected by drought, in Texas, was reported about 12 percent smaller than the crop a year earlier. Early production of carrots, celery, and tomatoes was expected to be larger, and of spinach smaller, this season than last.

RICE: Supply Up

The 1939-40 supply of Southern-grown rice—the 1939 crop plus carry-over on August 1 last—was 13.7 million barrels, compared with 13.3 million barrels in 1938-39. The 1939-40 supply in California—production plus October 1 carry-over—was 3.1 million barrels, compared with 2.7 million barrels in 1938-39.

Disappearance of rice during the period August-December was a little smaller than in the like period of 1938. United States stocks of rice on January 1, 1940, totaled about 11.1 million barrels compared with 10.5 million barrels a year earlier.

Prices are somewhat higher than at this time last year, due largely to anticipation of stronger foreign demand as a result of the European War. Improved domestic consumer demand and heavy shipments of rice to Puerto Rico have been price-supporting factors.

FRUITS: Prices Improved

Fresh fruits have been selling at fairly good prices this winter considering the curtailment of exports and the large supplies available for domestic consumption. Principal factor in the price situation is the improved buying power of consumers.

Apples: January 1 cold storage stocks of apples were slightly smaller than a

year earlier, but exports of apples are expected to be reduced materially in the first half of this year, and the quantity available for domestic consumption probably is about 4.5 million bushels more than the 20.5 million bushels sold in the domestic market in the first half of 1939. Government purchases for relief are being continued.

Pears: January 1 stocks of pears totaled about 1.2 million boxes and baskets, compared with 1.4 million a year earlier. Even though exports are completely cut off, the available supply is no larger than the quantity sold in domestic markets during the first 6 months of 1939—approximately 1.2 million boxes and baskets.

Citrus: Citrus fruits were extensively damaged by the freezing weather in Florida and Texas in late January, but trees were reported to have escaped with little injury. Prior to the freeze it was estimated that supplies of citrus fruits were slightly smaller this winter than last, but considerably above the 1928-37 average. A record large Florida orange crop of 35.9 million boxes had been indicated, but the California navel crop—indicated at 15.4 million boxes—is about 14 percent smaller than in 1938-39. The grapefruit crop was indicated about 16 percent smaller than a year earlier, and lemon production about 6 percent smaller. Marketings of the citrus crops had been at about a normal rate.

DAIRY: Production Record

More cows are on farms this winter than last, the cows are being fed liberally, and milk production is expected to continue in large volume. Milk production on January 1 was the largest on record. Feed costs more than at this time last year, but this has been offset in part by higher prices of dairy products.

A larger proportion of the milk produced this winter has been consumed as fluid milk and cream, a smaller proportion going into the manufacture of dairy products. Storage stocks of

dairy products were in normal volume at the beginning of the year as contrasted with the excessive supply a year earlier. The stocks situation was greatly helped during the past year by Government distribution of products to persons on relief.

It is expected that with improved buying power, consumer expenditures for butter will be larger during the first half of this year as contrasted with the corresponding period in 1939. (Of more than passing interest during January was the renewal of efforts in a number of cities—New York, Washington, Boston, Chicago—to reduce milk prices to consumers.)

POULTRY, EGGS: Records

The new year began with egg production the largest on record for that time of year. Prices were depressed in consequence, but advanced in late January as freezing weather curtailed production. Farm flocks usually reach a peak near the first of the year. There was an average of 85.2 layers per farm flock on January 1, compared with 82.8 a year earlier, and with 84.5 average for January in the 10 years 1929-38.

Egg production per farm flock on January 1 was 9 percent higher than on that date in 1939, and about 40 percent above the 1929-38 average. Increases as compared with a year ago were: West North Central States, about 14 percent; East North Central, about 13 percent; Western, about 11 percent; South Atlantic, about 8 percent; North Atlantic and South Central, about 3 percent.

Farm prices of chickens and eggs in mid-January averaged the lowest for that month in 6 years. Feed prices are relatively high. It is expected that during the first half of 1940 more eggs and more pounds of poultry will be required to buy 100 pounds of feed than in the corresponding period of 1939. Cold storage stocks of poultry and eggs were larger this January 1 than last.

—FRANK GEORGE.

Trends in Food Prices

INTEREST has centered upon domestic price trends since the outbreak of the war in Europe. The general public expected sharply rising food prices and some looked for profiteering in food products by middlemen. Actually, retail food prices declined following the initial spurt in early September, and middlemen's margins, after showing no increase from August to September, dropped below the August level during the last 3 months of 1939.

In order to trace general trends in prices and margins, retail prices of 58 food items have been combined so as to represent expenditures by a typical workingman's family. Payments to farmers for equivalent quantities of farm products are compared with these retail expenditures. The difference or margin between farm value and retail value represents the total charges for all marketing services—transportation, processing, storage, and distribution—required to transfer food products from the farmer to the consumer.

Indexes in the following table for 58 foods show the changes in the marketing margin and in food prices at retail and paid farmers. These indexes are expressed in terms of August 1939—the month preceding the European war—as 100.

58 Foods Consumed by a Typical Workingman's Family—Index Numbers of Retail Value, Equivalent Farm Value, and Marketing Margin, selected months of 1938 and 1939

August 1939 = 100

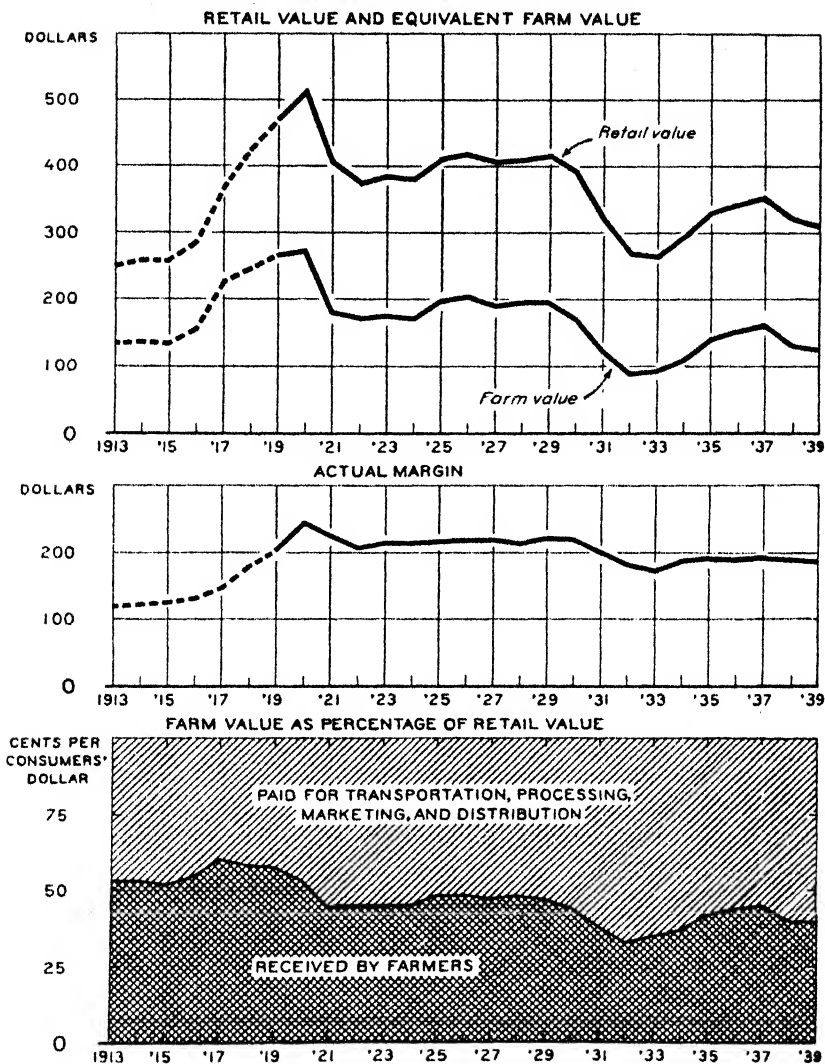
Month	Farm value	Retail value	Margin
1938:			
August.....	108	105	105
September.....	108	106	104
December.....	113	106	102
1939:			
January.....	108	104	101
April.....	104	102	101
July.....	102	102	102
August.....	100	100	100
September.....	114	105	100
October.....	114	104	98
November.....	116	104	96
December.....	112	103	97

PRICES of most food products rose markedly from mid-August to mid-September. Retail food prices as a whole rose 5 percent to September 15, but slowly declined to a level which in December was 3 percent above August. The marketing margin did not change from August to September, but dropped 3 percent during the last three months of 1939. All of the dollar increase in retail value of 58 foods occurring August to September was passed back to the farmer, with farm value of 58 foods rising by 14 percent. Farm prices showed a slight further gain in November, but declined in December to a level 12 percent above August and 1 percent below December of 1938. Prices received by farmers for eggs were a record low for December, and hog prices were the lowest for the month since 1933.

THE accompanying chart depicts the trends, 1913-39, of retail value, equivalent farm value, and marketing margin for the entire group of 58 foods. For the year 1939 a family would have spent for these foods at retail \$311, a drop of 3 percent below the \$321 spent in 1938. The equivalent farm value was \$126 for 1939 compared with \$130 in 1938 and \$160 in 1937. The marketing margin at \$185 in 1939 was the smallest since 1933 and the second smallest in the last 21 years.

Examining the trends illustrated in this chart it is obvious that the marketing margin is much less flexible than the retail value. This means that the wide variation in retail value or consumers' expenditures is passed back to the farmer in the form of extremely violent fluctuations in farm value. The 21 percent decline in retail value occurring from 1920 to 1921 was accompanied by a 34 percent drop in farm value. During the depression years 1931-34, and again during the last 2 years 1938-39 the farmer received less for these foods than he did

RETAIL AND FARM VALUE OF 58 FOODS, 1913-39 (BASED ON AMOUNT CONSUMED ANNUALLY BY A TYPICAL WORKINGMAN'S FAMILY)



during the pre-war years 1913-15, although consumers were obliged to spend more for retail food purchases than in the pre-war period.

THE lower section of the chart shows farm value as a percentage of retail value. This may be used as a rough measure of the farmer's share of the consumer's dollar spent for foods. For individual foods this share varies widely, in 1938 ranging from about 60 cents for eggs and some meat

products down to 8 cents for soda crackers. The farmer's share remained practically unchanged at 40½ cents in 1938 and 1939, compared with the recent high point of 45 cents in 1937 and the low of 33 cents in 1932. During the decade of the 1920's this share averaged about 47 cents. The developments of recent months, if continued, promise an increase in the farmer's share for the year 1940.

R. O. BEEN.

The Trade-Agreements Program

UNDER authority of the Trade Agreement Act of 1934 the United States has reciprocal trade agreements with 21 foreign countries ¹—in Europe, the Near East, Latin America, and North America. The agreements with Nicaragua and with Czechoslovakia are not now in full effect. Trade agreement countries account for about 60 percent of the total export and import trade of the United States. Their commerce with this country and among themselves constitutes about three-fifths of the total international trade of the world.

By entering into trade agreements with the United States these nations may be presumed to have evinced their acceptance of those principles of fair and nondiscriminatory trade, with the fewest possible excessive and uneconomic barriers, upon which the trade-agreements program is based.

THE Trade Agreement Act authorizes the President, in negotiating an agreement, to make tariff modifications—by not more than 50 percent of the existing tariff rate—and other adjustments in United States customs treatment of foreign goods. The Act requires that in negotiating the agreements the President obtain the advice and assistance of the Departments of Agriculture, Commerce, and State, and of the United States Tariff Commission. It also requires that full opportunity be given all interested persons to present facts and views on any agreement before it is concluded.

Through this bargaining process the trade-agreement countries have modified or removed hundreds of excessive tariffs, quota restrictions, exchange controls, and other barriers to their imports of American goods. To in-

duce them to make these adjustments this country has modified certain United States tariffs, guaranteed not to impose duties on certain commodities already on the duty-free list, and made other concessions in its customs treatment of foreign goods.

By lowering or removing such barriers on both sides, the agreements help to reopen, sustain, or enlarge both foreign and domestic markets for products of American farms and factories, thus tending to increase incomes and employment among American farmers and industrial workers, enhance their ability to buy each others' products, and to raise the standards of living of all economic groups in the United States.

Through these agreements the United States has obtained from foreign countries tariff and other modifications on agricultural commodities which, on the basis of 1937 data, made up 47.3 percent of total United States farm exports. It has also obtained concessions on industrial products which, on the basis of 1937 data, constituted 24.9 percent of this country's nonagricultural exports.

OUTSTANDING among the concessions obtained on American agricultural products is the United Kingdom's removal of its preferential tariffs of 6 cents a bushel on wheat and 10 percent ad valorem on lard, and the enlargement of the British import quotas on American hams, which are duty-free. Canada reduced its duties by from 12 to 75 percent on various meat products from the United States, and 16 countries other than the United Kingdom and Canada have made concessions on American meat products. Cuba, the second largest foreign market for American lard, reduced its duties on that product from 9.6 cents a pound to 1.5 cents, and abolished its consumption tax of 1 cent a pound.

Fourteen agreements now in effect include concessions on fresh or canned

¹ Belgium, Brazil, Canada, Colombia, Costa Rica, Cuba, Czechoslovakia, Ecuador, El Salvador, Finland, France, Guatemala, Haiti, Honduras, Nicaragua, Netherlands and Colonies, Sweden, Switzerland, Turkey, United Kingdom and Colonies, and Venezuela.

citrus fruits from the United States; concessions on American dried fruits have been obtained from all but one of the agreement countries, concessions on American fresh fruits from all but two, and concessions on various canned fruits from all except one. Seventeen agreements now in effect reduce or bind the duties on fresh, dried, or canned vegetables from the United States.

Great Britain, Canada, Guatemala, El Salvador, the Netherlands, Cuba, Ecuador, Venezuela, Switzerland, Honduras, and Costa Rica have made concessions on American wheat or wheat flour.

The United States has obtained concessions on a wide range of its non-agricultural products, manufactures, and semimanufactures. Among these are iron and steel products, semimanufactures, and manufactures; automotive products; electrical equipment; industrial and agricultural machinery; office appliances and equipment; rubber products; chemicals, paints, and allied products; hides and leather manufactures; and certain textiles. When exports of such products increase, the domestic market for farm products is enlarged.

IN order to obtain these improvements in foreign treatment of its exports, the United States has, in turn, made concessions on imports. This country has reduced duties on commodities which, in 1937, made up 14.6 percent, by value, of United States imports classified as agricultural. This includes sugar from Cuba which, in that year, constituted 7.3 percent of the total agricultural imports. In addition, the United States has guaranteed against increase the existing rates of duty on commodities that accounted for 1 percent of our 1937 agricultural imports, and has guaranteed continuance of existing duty-free status of commodities making up 38.6 percent of such imports.

The United States has made duty reductions on nonagricultural articles which, in 1937, constituted 23.4 percent of such imports into this country;

has bound against increase the existing rates of duty on 3.4 percent of our 1937 nonagricultural imports; and has guaranteed continuance of existing duty-free status on 38.6 percent of our 1937 nonagricultural imports.

Agricultural imports on which concessions have been made by the United States fall into three classes: (1) Tropical or other products not grown in the United States, most of them not subject to United States tariffs; (2) products the imports of which supplement domestic production requirements; and (3) special foreign products for which a demand, often a luxury demand, exists in the United States.

Most of the United States concessions that have been made on products in the first class consist of guaranteeing continuance of the existing duty-free status. Tariff modifications on the second class, in the cases of live cattle, milk and cream, certain fruits and vegetables, and other products, have been so restricted as to apply only to limited quotas of the commodity in question or to imports at specified seasons.

OPERATION of the trade-agreements program has been accompanied by marked increases in United States international trade. Estimated total United States exports in 1939 were 3.1 billion dollars as against 1.7 billion in 1933. Estimated total United States imports were valued at 2.3 billion dollars as compared with 1.5 billion in 1933. In the preceding period, marked by extremely high United States tariffs and extremely rigorous restrictions by foreign countries, United States exports had dropped from 5.2 billion dollars in 1929 to 1.6 billion in 1932, and imports had declined from 4.4 billion to 1.3 billion.

Trade agreements, by reducing and removing barriers to international commerce, played an important part in these increases, although many other factors—political unrest, armaments production, crop conditions, and the like—combined to determine the course of foreign trade.

As compared with the annual average for the 2-year period 1934-35, the annual average of United States exports to trade-agreement countries in the 2-year period 1938-39 increased more than 50 percent, while exports to nonagreement countries rose only 28.3 percent. United States imports, in the same periods, rose 17.8 percent in the case of trade-agreement countries and only 11.3 percent in the case of non-agreement countries.

United States farm exports to countries with which trade agreements were in effect during the fiscal year ended June 30, 1939, were 15 percent larger than farm exports to the same countries in the fiscal year ended June 30, 1936, whereas farm exports to all other countries declined 19 percent in the same period.

NOT only have American exports to the trade-agreement countries increased. The United States has gen-

erally obtained during the agreement period a greater share of the total markets in those countries than have the other countries supplying them.

For example, Cuban purchases from the United States have more than doubled since the agreement with that country went into effect in 1934. Total Canadian imports from the United States increased 115 million dollars or 37 percent in 1938, as compared to 1935, the year preceding the first Canadian agreement. Similar results appear in trade between the United States and the Netherlands, Switzerland, and other countries.

Trade-control measures taken in the interests of national defense since the outbreak of war in Europe have not made necessary the termination of any trade agreement.

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Department of State.*

Six Years of Marketing Agreements

II: Fruits and Vegetables

DURING the last 6 years more than 50 different marketing agreement programs have been in effect to help growers and handlers improve selling conditions for a wide range of specialty crops, particularly fruits and vegetables. The farm value of the commodities marketed under these programs since 1933 is estimated at nearly one billion dollars. Products have included citrus fruits, pears, plums, peaches, watermelons, onions, celery, lettuce, peas, potatoes, nuts, tobacco, and hops.

In 1939 more than 86,000 farmers produced the products which were sold under the terms of marketing agreement programs for specialty crops. The farm value of the products so handled aggregated \$123,500,000. The principal activity was in oranges and grapefruit, with the three main producing areas operating under

marketing agreement programs toward the end of the season to improve selling conditions for the largest citrus crop on record. The California-Arizona citrus industry has had a marketing agreement program in operation almost continuously since 1933. The program for Texas was in its second year of operation during 1939, while a new program was put into effect for the Florida citrus industry in February of that year.

OF more than 45 marketing agreement programs in effect during the 1939 calendar year, 20 were for commodities which included fruits, vegetables, nuts, hops, and tobacco. Of this number, 16 marketing agreement programs were in actual operation. All were in effect through marketing agreements and orders, except one for Connecticut Valley shade-grown to-

bacco which continued through a marketing agreement and license.

The specialty crops for which marketing agreement programs are in effect are grown in concentrated areas of production located at fairly great distances from market outlets. The length of haul to consuming centers ranges from 800 miles to an average of over 2,000 miles in the case of many of the crops on the Pacific coast for which marketing agreement programs are in effect.

THE Marketing Agreement Act specifies the types of regulation which may be employed in regulating the handling of agricultural commodities. For specific commodities other than milk and its products, the Act authorizes regulations which may be used to govern the volume, grade, or size of the commodity shipped out of the producing area during any given period. The specific types of regulation which may be used for any particular industry are governed by the terms of the marketing agreement program which it has in effect. Each marketing agreement program is so written as to incorporate those authorized regulatory provisions which will best meet the needs of the industry involved.

Volume regulation is designed to control the quantity of a commodity shipped out of the producing area during a given period of time. It is designed to adjust shipments more nearly in keeping with what is deemed advisable to be shipped to prevent glutted markets and low returns to producers. This type of regulation is difficult to administer in that it presupposes thorough knowledge of demand conditions, accurate determination of available supplies, and equitable allotment among all handlers of the advisable quantity to be shipped. Volume regulation has operated most successfully where a high degree of industry organization existed and assured the conditions necessary for its operation.

DURING 1939 the movement of such commodities as California-Arizona oranges, Texas grapefruit and oranges, Pacific coast walnuts and hops, and fresh prunes grown in Oregon and Washington was governed by volume regulations issued under marketing-agreement programs. In the case of California-Arizona oranges, Texas citrus fruit, and Oregon and Washington fresh prunes, the regulations involved control over the rate of flow to market as a means of improving returns to growers. The regulations for walnuts sought to improve returns to producers through the diversion of a portion of the merchantable supplies from the domestic unshelled market into the shelled and export markets. The program for hops restricted the total quantity marketed through allotments to growers made in advance of harvesting. This adjusted the quantity of hops sold more nearly in keeping with what the markets required and saved growers the expense of harvesting and trying to sell supplies which could not readily be absorbed by the trade.

REGULATIONS restricting the movement of certain grades or sizes of a commodity are being more commonly employed in marketing-agreement programs. Grade and size regulations issued during 1939 governed shipments of such products as Florida and Texas citrus fruits, southeastern watermelons, Colorado vegetables, Colorado peaches, California Bartlett pears, Elberta peaches and plums, Oregon and Washington fresh prunes, and Pacific coast fall and winter pears.

For the most part, grade and size regulations are designed to keep off the markets all or part of any low grade or discounted size of a product so as to improve both the quality of products shipped and the returns to producers. In general, where grade and size regulations have been put into effect, it was believed that if the prohibited grades or sizes had been

permitted to be shipped, they would have returned prices to growers insufficient to cover the direct costs of harvesting and marketing.

Under some of the marketing-agreement programs, this type of regulation has been used to prevent shipment of immature products during early weeks of a season. Both growers and shippers contend that the shipment of immature produce early in the season has an adverse effect on both consumer demand and returns to growers. This has been prevented under some marketing-agreement programs through the use of regulations governing the size of the commodity which may be shipped. In such instances, the commodity involved is of such nature as to increase in size and maturity without becoming overripe for shipment.

EACH marketing agreement program provides for the establishment of an administrative agency, and for the issuance of the regulations to govern the handling of the commodity or shipments out of the defined producing area. The administrative agency is dominated by the membership of growers, and it usually consists of one committee named from among nominees elected by growers and handlers to represent the respective group interests. Some of these programs have two committees, one of growers responsible for administrative action, and the other of handlers who act in an advisory capacity.

Regulations which are to govern shipments during any given period are recommended by the administrative agency to the Secretary of Agriculture, who is responsible for putting any regulation under a marketing agreement program into effect. The nature of the regulation which may be recommended varies with conditions both in the producing area and in the markets, and is governed by the limitations prescribed in the marketing agreement and order and by the Marketing Agreement Act.

SIX years of experience in regulating shipments reveal that certain conditions must exist within an industry before a marketing agreement program can operate successfully. Most important of these is organization among producers in the marketing of their products. The marketing agreement programs in operation for the longest time are those for industries such as California-Arizona citrus and Pacific Coast walnuts, in which most of the growers are members of strong cooperatives. The degree of organization which is necessary depends largely on the type of regulation which is to be employed, volume regulation requiring the highest degree of organization in an industry's marketing structure. In addition, the marketing institutions and grower-handler relationships in an industry operating under a marketing

Estimated Number of Growers and Approximate Annual Farm Value of Crops for Which Marketing Agreement Programs Were in Effect During the Calendar Year 1939

Marketing agreement program	Number of growers	Farm value (1,000 dollars)
Walnuts—California, Oregon, and Washington ¹	14,000	11,240
California-Arizona citrus ¹	20,000	43,400
Western Washington vegetables	1,300	1,150
Watermelons—Florida, Georgia, North Carolina, and South Carolina ¹	10,000	2,520
Colorado vegetables ¹	250	950
Utah onions ¹	200	220
Texas citrus ¹	7,500	6,190
Oregon cauliflower ¹	300	90
Colorado peaches ¹	600	970
Colorado onions ¹	1,100	830
Arkansas grapes.....	1,000	190
Fresh prunes—eastern Oregon and eastern Washington ¹	600	380
Hops—California, Oregon, and Washington ¹	1,250	5,550
Package bees and queen bees ¹	250	450
California, Oregon, and Washington fall and winter pears ¹	3,000	1,600
Florida citrus ¹	20,000	35,150
California Elberta peaches, Bartlett pears, plums, apricots, and cherries ¹	7,000	6,780
Mississippi tomatoes.....	2,750	540
California Beurre hardy pears ¹	500	270
Connecticut Valley shade tobacco ¹	50	7,000
Totals for marketing agreements in effect in 1939.....	91,650	125,470
Totals for marketing agreements in operation in 1939.....	86,300	123,500

¹ Operative during 1939.

agreement program must be such that grower and handler equity will be insured when regulations are in force. Effective regulation under these programs requires the adjustment of conditions in an industry to the needs of the program, recognizing the type of regulation to be employed.

Adequate facilities must exist to provide the administrative committees with crop estimates, market information, and other data necessary in considering proposed shipping regulations. Each marketing agreement program contains provisions which authorize the working machinery for gathering the required kinds of information.

EXPERIENCE has shown that regulations cannot be consistently

and effectively administered without thorough appreciation by industry groups of the fundamental principles of marketing control. It is not uncommon for some to feel that the mere issuance of a regulation will bring about an increase in price and improvement in growers' returns. In no case has the mere existence of a regulation under a marketing agreement program increased prices above what could be expected for the volumes and composition of the supply marketed. Actual regulation of shipments must be brought about if prices and returns to growers are to be influenced.

NATHAN KOENIG,
*Division of Marketing and
Marketing Agreements.*

Cash Farm Income \$8,518,000,000 in 1939

FARMERS' total cash income from marketings, commodities placed under loan, and Government payments in 1939 amounted to \$8,518,000,000. In 1938 total cash farm income was \$8,081,000,000 and in 1937 the income was \$9,111,000,000. The estimates of income for 1938 and 1939 are revisions from those published in the December 1939 issue of the Agricultural Situation and take into account revisions in production, as shown in the December crop report, in prices received by farmers, and final data on Government payments in 1939.

Cash income from farm marketings and from commodities placed under loan totals \$7,711,000,000 in 1939 compared with \$7,599,000,000 in 1938. Government payments on the Soil Conservation Program, Sugar Act payments, and price parity payments totaled \$807,000,000 in 1939 compared with \$482,000,000 in 1938.

INCOME from crops in 1939 was 4 percent larger than in 1938, where-

as income from livestock and livestock products was unchanged. Total income from crops in 1939 was \$3,238,000,000 compared with \$3,126,000,000 in 1938. Income from several of the more important crops was larger in 1939 than in 1938. Government loans on corn added materially to farmers' income in 1939. Cash income from sales and loans on corn amounted to \$326,000,000 compared with \$269,000,000 a year earlier. Income from flax in 1939 was more than twice as large as in 1938 while income from most other grains except grain sorghums was about the same as a year earlier. Because of the lower prices for grain sorghums, income was only about 74 percent as large in 1939 as in 1938.

Marketings of cotton in 1939 were somewhat smaller than in 1938 so that in spite of higher prices during much of the 1939 marketing season total income from cotton and cottonseed declined from \$647,000,000 in 1938 to \$609,000,000 in 1939. The marked decline in tobacco prices more than offset the unusually large sales

of 1939 and income from tobacco declined from \$294,000,000 in 1938 to \$264,000,000 in 1939.

THE improvement in consumer income in 1939 was reflected in the income to farmers from fruits and

Cash Farm Income in the United States, by Crops and by Groups of Livestock and Livestock Products, Calendar Years 1936-39

Commodity	1936	1937	1938 ¹	1939 ¹
CROPS				
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
Corn.....	264,918	224,316	269,395	326,039
Wheat.....	450,859	604,640	366,082	396,677
Oats.....	47,333	67,022	42,522	44,516
Barley.....	45,595	42,672	38,165	37,397
Rye.....	15,196	10,856	8,325	8,700
Buckwheat.....	1,887	1,952	1,519	1,371
Flaxseed.....	10,397	13,062	12,164	24,463
Rice.....	31,556	32,597	33,977	32,848
Grain sorghums.....	7,628	8,332	7,499	5,514
Cotton lint.....	763,360	770,377	562,131	525,320
Cottonseed.....	141,619	113,390	84,700	83,485
Tobacco.....	243,169	320,518	294,333	263,979
Dry edible beans.....	42,909	48,426	37,529	36,773
Potatoes.....	229,820	183,736	127,701	157,059
Sweetpotatoes.....	22,816	24,391	21,792	21,350
Truck crops ²	358,261	388,631	345,673	367,282
Citrus fruits.....	126,628	147,705	101,044	99,600
Apples.....	95,444	110,481	82,980	97,760
Peaches.....	40,014	50,330	31,169	40,572
Pears.....	18,803	16,875	12,630	15,437
Cherries.....	7,529	12,405	7,056	9,080
Grapes.....	39,043	54,638	37,828	37,785
Strawberries.....	34,902	42,604	37,509	39,158
Cranberries.....	6,848	7,561	5,226	6,909
Tree nuts ³	16,224	21,144	18,506	18,930
Small fruits ⁴	10,777	13,630	10,618	11,094
Other fruits ⁵	38,054	41,850	31,097	36,731
Sugarcane for sugar.....	19,952	17,444	18,181	16,511
Sugar beets.....	55,675	51,836	54,598	50,481
Sugarcane sirup.....	5,940	6,671	5,026	6,497
Sorgo sirup.....	3,793	3,857	3,569	3,393
Maple sugar and sirup.....	3,280	3,923	4,370	4,104
Hay.....	85,729	95,092	67,117	65,400
Clover seed (red and alsike).....	12,319	10,884	12,642	15,069
Sweetclover seed.....	2,143	2,150	1,288	2,028
Lespedeza seed.....	2,785	3,063	5,204	5,623
Alfalfa seed.....	8,804	12,156	9,931	11,983
Timothy seed.....	2,549	2,707	1,750	1,970
Soybeans.....	28,745	30,753	32,313	49,651
Cowpeas.....	4,736	5,826	6,147	5,729
Peanuts.....	35,135	38,207	45,257	34,086
Hops.....	8,942	6,411	6,340	8,773
Other ⁶	185,146	201,948	192,302	210,869
Total crops.....	3,575,112	3,877,787	3,126,224	3,237,906
LIVESTOCK AND LIVESTOCK PRODUCTS				
Meat animals.....	2,232,843	2,329,917	2,179,606	2,262,136
Poultry ⁷ and eggs.....	798,561	831,763	777,173	722,166
Dairy products.....	1,459,182	1,531,610	1,398,246	1,354,760
Wool.....	96,824	117,270	71,378	85,196
Other ⁸	49,519	55,878	46,815	48,727
Total livestock.....	4,636,929	4,866,338	4,473,218	4,472,985
Total crops and livestock.....	8,212,041	8,744,125	7,599,444	7,710,891
Government payments.....	287,252	366,899	482,221	807,065
Grand total including Government pay- ments.....	8,499,293	9,111,024	8,081,663	8,518,046

¹ Preliminary.

² Includes all vegetables except dry edible beans, potatoes, and sweetpotatoes.

³ Includes almonds, filberts, pecans, and Persian (English) walnuts.

⁴ Includes blackberries, blueberries, currants, dewberries, gooseberries, loganberries, raspberries, and other berries exclusive of cranberries, and strawberries.

⁵ Includes apricots, avocados, dates, figs, nectarines, olives, persimmons, pineapples, plums, pomegranates, prickly pears, prunes, and quinces, as well as cherries in noncommercial States.

⁶ Includes broomcorn, field peas, popcorn, peppermint, sweet sorghum for forage, and forest, nursery and greenhouse products.

⁷ Includes chickens, turkeys, ducks, and geese.

⁸ Includes horses, mules, mohair, and honey.

vegetables. Income from vegetables increased from \$533,000,000 in 1938 to \$582,000,000 in 1939. Income from fruits increased from \$376,000,000 to \$413,000,000. Sugar prices in 1939 were about the same as in 1938, but production of most of the important sugar crops was lower than a year earlier and income declined from \$87,000,000 in 1938 to \$81,000,000 in 1939. Income from soybeans, clover and alfalfa seeds, and hops was also somewhat larger in 1939 than in 1938.

Income from peanuts declined somewhat from 1938 to 1939 because of the decline in the farm marketings.

Income from livestock and livestock products amounted to \$4,473,000,000 both in 1938 and in 1939. Income from cattle and calves, sheep and lambs, and wool was somewhat higher in 1939 than in 1938, but these advances were offset by the decline in income from poultry and eggs, dairy products, and hogs.

C. M. PURVES.

Farm Debt and Farm Foreclosure

WHERE one farm a year was taken out of the hands of its owner involuntarily in the pre-World War period 1910-14, about six were taken away each year in the period 1930-34. While the combined volume of voluntary and involuntary transfers of farm land was being reduced by one-half from 1910 to 1935 the volume of involuntary transfers alone increased sixfold during this 25-year period. Involuntary transfers in the pre-war period represented an average of 3.6 percent of the combined total; in the 1930-34 period involuntary transfers averaged 25.1 percent of the total.

These data are based upon a preliminary study of farm real estate transfers in 39 selected counties distributed throughout the United States. Based largely on the results of a more complete study made in cooperation with the Works Progress Administration, national and regional estimates of farm real estate transfers are being prepared for publication by the Bureau of Agricultural Economics. The abstract here presented as to real-estate transfers for 39 counties may be considered as indicative of some of the facts expected from the more comprehensive study.

Index Numbers of Voluntary and Involuntary Transfers of Farm Real Estate in 39 Selected Counties, 5-year Averages, 1910-34

[1910-14=100]

Period	Voluntary	Involuntary	Total
1910-14.....	100	100	100
1915-19.....	108	148	109
1920-24.....	79	287	85
1925-29.....	73	405	85
1930-34.....	52	581	68

Percentage Distribution of Voluntary and Involuntary Transfers of Farm Real Estate in 39 Selected Counties 5-year Averages, 1910-34

Period	Voluntary	Involuntary
	Percent	Percent
1910-14.....	96.4	3.6
1915-19.....	95.5	4.5
1920-24.....	89.2	10.8
1925-29.....	83.6	16.4
1930-34.....	74.9	25.1

Source: Bureau of Agricultural Economics. Based on the recent study "Transfers of Farm Real Estate," August 1939. Data as to number of properties transferred, by kind of transfer, obtained from county records.

FROM 1930 to 1939 the total farm-mortgage debt was reduced from 9.6 billion dollars to 7.1 billion dollars. A substantial part of this reduction of

25 percent was almost entirely the result of the forced selling which this study indicates had increased by about five times in 25 years. Despite this decrease in the total farm-mortgage debt, the smaller indebtedness still represented the same percentage of the value of all farm lands and buildings at the beginning of 1939 as it did at the peak of farm-mortgage indebtedness in 1923.

In 1910 the total farm-mortgage debt was 3.2 billion dollars. This represented about 9 percent of the 35 billion dollars at which all farm land and buildings were valued in that year. The peak of the farm-mortgage debt was in 1923 when it was 10.8 billion dollars or 20 percent of the value of the land and buildings. At the beginning of 1939 the smaller farm-mortgage debt of 7.1 billion dollars still represented about 20 percent of the value of all land and buildings estimated at 35.4 billion dollars. In 1933 when land property values were at their depression low, the debt represented about 28 percent of the value of land and buildings in that year.

IN spite of the efforts of Federal credit agencies to relieve the farm-mortgage situation there is still widespread evidence that the mortgage debt is a major problem on the farm. During the second quarter of 1939 farm foreclosure sales, not including farms acquired by voluntary deed, by the Federal land bank and the Land Bank Commissioner were the highest of any quarter in the last 5 years. For the year, however, foreclosure sales by these agencies dropped by about 60 percent in the last 6 months compared with the first half of 1939.

Farm foreclosure sales of these two Federal agencies in the third quarter of 1939 amounted to 4.1 per thousand farms mortgaged to these agencies in 1935. This represents a decrease of 31 percent from the second quarter when the comparable figure for sales was 5.2 per thousand. The number of foreclosures by these agencies in the third quarter showed an increase of 21

percent above the comparable quarter for 1938 while the second quarter of 1939 was up 33 percent over the same period in the previous year. It is estimated that the last quarter of the year just closed will show a drop of 50 percent under the previous quarter of 1939 and about a third below the same period in 1938.

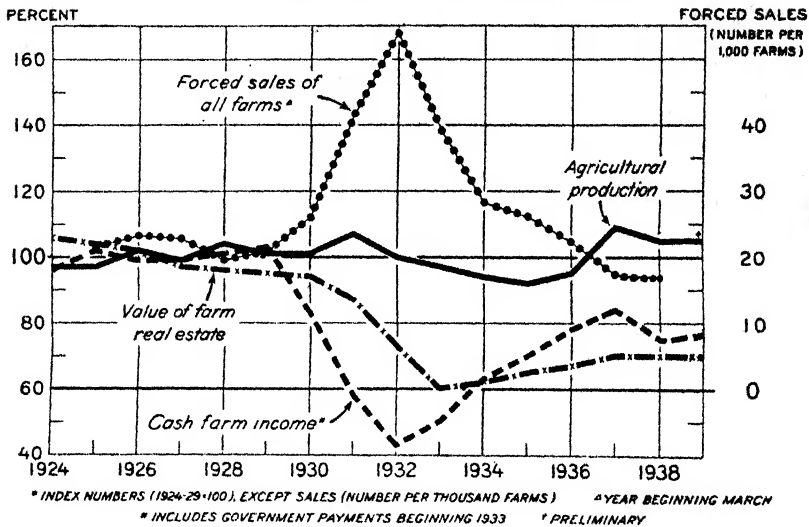
For all types of lenders farm foreclosure sales per thousand farms mortgaged were at about the same level for the first 9 months of 1939 as they were for the comparable period in 1938. The first three quarters of 1939 saw 12.3 per thousand farms sold by foreclosure compared with 12.7 per thousand in 1938.

Quarter ended	Federal land bank and land bank board	Individuals	Commercial banks	Insurance companies	Miscellaneous	All lenders
March.....	4.0	4.1	6.4	8.3	3.2	4.5
June.....	5.2	3.6	5.9	7.3	2.5	4.5
September.....	4.1	2.8	4.5	4.8	1.4	3.3

THE trend for all forced sales of farms for the nation as a whole from 1925 down to 1938 is graphically presented in the accompanying chart. The dotted line showing forced sales and related defaults per 1,000 farms for years beginning March 15 reveals that involuntary transfers were relatively unchanged during the 5 years 1925 to 1929, never rising above 23.3 per 1,000 for the whole time. In 1930, however, there was a sharp rise to 26.1 per 1,000. Forced transfers of farm real estate reached their peak of 54.1 per 1,000 in 1932. Since then forced transfers have gradually decreased and during the last 2 years have been at a level of approximately 17 per 1,000. With a large falling off in the total volume of all types of farm real estate transfers the relatively large numbers of forced sales which continue to be shown are all the more serious.

Probably the most significant conclusion to be drawn from this chart is the inverse ratio between fluctuations

AGRICULTURAL PRODUCTION, CASH FARM INCOME, VALUE OF FARM REAL ESTATE, AND FORCED SALES OF ALL FARMS, UNITED STATES, 1924-39*



in cash farm income and the volume of forced sales. Comparing the index for cash income with a line showing forced sales of farm real estate per 1,000 farms it will be seen that from 1925 to 1929 these were virtually parallel. But when cash income began its precipitous drop in 1929, forced sales immediately went up. Cash farm income reached its post-war depression low in 1932 and in that year forced farm sales were at their peak. The rise out of the depression from 1932 was accompanied by a comparable drop in forced farm sales through 1937 when cash farm income reached its post-depression peak.

The addition of an index showing farm real estate values brings out the lag in the translation of a shift in farm income in terms of land values on both the downswing and the upswing of the cycle. Real estate values fell more gradually than farm income during the depression. From 1932 through 1937 cash farm income increased 95 percent and during this period there was a gain of only 16 percent in farm real estate values. From 1929 to 1932, however, cash farm incomes had declined about three-fifths while farm real estate values declined somewhat more than one-third.

THE distress transfers in the last decade have unquestionably been an important factor in keeping farm real estate values from moving upward more rapidly as farm income increased after 1932. As the study of the 39 selected areas indicates, the average index for all types of transfer considered declined from 85 in the 1925-29 period to 68 in the 1930-34 period. The index for involuntary transfers rose from 465 for the earlier period to 581 in the latter, while the voluntary index figure dropped from 73 to 52. For 1925-29 involuntary transfers were 16.4 percent of the total whereas from 1930-34 they averaged 25.1 percent.

The substantial decrease in distress transfers since 1933 is generally considered a factor strengthening the tone of the farm real estate market. However, the large real estate holdings of the leading lending agencies have exerted an adverse influence on current real estate value movements. In 1929 the four¹ leading groups of lending agencies held farm real estate valued at \$149,559,000 but on January 1, 1939,

¹ Federal Land Bank and Federal Farm Mortgage Corporation, life insurance companies, joint stock land banks, and three State credit agencies.

these four groups held land valued at \$969,487,000. When the holdings of insured commercial banks are added to the 1939 total (figures for these banks did not become available until in 1936) holdings reach \$1,018,630,000. Most of these agencies are now selling more farms than they are acquiring, however, which should tend to relieve this situation somewhat.

THE fact that forced sales have not shown the same quick response to a drop in cash farm income since 1937 as in 1932 and that the consequences have probably not been so serious in recent years may have a number of causes. A factor of major significance affecting the whole situation has been the increase in the total farm debt held by governmental agencies and the effect that Government lending programs have had on general farm mortgage policies. The decline in farm income in 1937-38 was cushioned by governmental assistance and there was available to the farmer credit agencies which intervened to prevent a rapid rise in forced sales such as occurred in 1932. The extensive refinancing activities of the Farm Credit Administration up to 1935 had the effect of strengthening the financial position of many distressed farmers.

In 1930 about 12 percent of the total farm mortgage debt of the country was held by federally sponsored agencies. Today almost 40 percent of the total farm mortgage debt is held by such lending agencies. Most of this increase has come since 1933. The following table shows the number of foreclosure sales per 1,000 farms, by each type of lender:

Estimated Number of Farm Foreclosure Sales per 1,000 Farms Mortgaged to Each Type of Lender on January 1, 1935, From January 1934 Through June 1939¹

Year and quarter	Federal land banks and Land Bank Commissioner	Individuals	Commercial	Insurance companies	Miscellaneous	Total all lenders
Year:						
1934.....	4.7	34.3	36.9	92.5	29.7	27.8
1935.....	11.8	28.5	36.9	67.7	26.7	26.1
1936.....	15.7	24.5	34.5	49.7	18.5	23.3
1937.....	13.1	20.0	30.4	31.2	13.2	18.5
1938.....	13.4	17.3	25.9	29.2	9.8	16.4

¹ Based on reports from counties including from 22 to 30 percent of the farms in the U. S.

Source: Farm Credit Administration--Farm Credit Quarterly, September 30, 1939.

The percentage of delinquent loans that has been permitted by the two federal agencies over a period of 5 years is also significant:

Percentage of Farm Loans Classified as Delinquent

	1935	1936	1937	1938	1939
Federal Land Bank	19.9	14.9	15.9	20.0	20.5
Farm Mortgage Corp.	19.5	18.6	21.6	28.2	28.9

The fact that so large a percentage of the federally held mortgage debt is delinquent each year—and figures are available only for this portion of the farm debt—is a forceful indication that although much has been accomplished there is still a great deal of financial distress among farmers.

E. HJALMAR BJORNSON.

Index

A general index of articles which have appeared in The Agricultural Situation during the last 3 years—1937-39—is obtainable from the Bureau of Agricultural Economics, Washington, D. C.

Fresh Vegetables in Winter

TWENTY years ago—in 1919—nine southern States had approximately 232,000 acres in vegetables. These same States had in 1939 about 1,100,000 acres in vegetables. All show marked increases during these 20 years, but the greatest percentage increases have been in Texas, Louisiana, and South Carolina. Acreage in Texas increased from about 50,000 acres in 1919 to approximately 400,000 in 1939; in Louisiana, from 12,000 to 75,000; in South Carolina, from 16,000 to 90,000 acres.

There has been a marked increase also in the acreage of vegetables in Florida and Georgia. The expansion in Florida was from 61,000 acres in 1919 to 185,000 acres in 1939, and in Georgia from 37,000 to 135,000 acres. In California, the vegetable acreage increased from about 146,000 in 1919 to slightly more than 500,000 in 1939. Acreage in Arizona increased from about 6,000 in 1919 to slightly more than 45,000 in 1939.

(All of the California acreage is not planted to winter vegetables; California produces and markets some kinds of vegetables the year round, and it is not possible to segregate those grown primarily for the winter markets. Most of the vegetables in Arizona are produced largely for the winter and early spring markets.)

MANY things have contributed to the development and expansion of the winter vegetable industry in all areas, but 4 have been most important. These are:

1. The sharp rise in consumer purchasing power in the northern industrial cities during and following the World War.

2. The development of heating and refrigeration facilities for vegetables in transit from farm to market.

3. A general decline in the prices of and returns from

It is hard to tell nowadays from the stands of the greens grocer when seasons begin and end. Tender fresh vegetables are for sale there the year round—in winter as well as in other seasons—lettuce and tomatoes, celery and carrots, green peppers and spinach, snap and fresh lima beans, green peas, and many others. The production of fresh vegetables for winter markets is a 70-million-dollar industry. How and why it has grown in the last 20 years are described in the accompanying article.—Ed.

other important agricultural products commonly produced in these areas.

4. The emphasis which has been placed upon the vitamin content and health-promoting qualities of fresh vegetables.

THREE decades ago, few people—in the highest income brackets—could afford to buy the limited supplies of fresh vegetables available in winter. Relatively high production and transportation and marketing costs made it necessary that these products sell at high prices. But as national income rose, more people moved up into the higher income brackets, and the demand for fresh vegetables during winter increased.

At the same time, improvements in cultural, transportation, and marketing practices tended to reduce costs. Producers were encouraged to expand production. The collapse of prices of the more staple agricultural products in the early 1920's and again in the early 1930's also forced more producers into the winter vegetable production field. Prices of vegetables had declined much less than prices of most other kinds of farm products.

Extensive research by Federal, State, and private agencies revealed the valuable vitamin content of fresh vegetables, and dietitians have continuously insisted upon the increased use of these foods in the dietary. The promotion of fresh vegetables by food faddists also has been effective in increasing consumption of these garden crops.

THE total value of production or income to producers of vegetables in the southern States was close to 70 million dollars in 1939. The highest figure on record was in 1929 when the total income of consumers also was at a record high. In that year the value for the nine southern States was approximately double the 1919 figure of 43 million dollars. In California and Arizona the income from vegetable production has made even more striking gains.

But the Government statistics reveal a disproportionate rise in produc-

tion and income. Whereas acreage and production increased nearly five-fold in the southern States during the last 2 decades, the value of production or income to producers increased only about 50 percent. Prices per unit and returns per acre of winter vegetables as a group have declined, a reduction that has been offset only in part by the lowering of costs of production by the use of improved cultural practices.

Increased use of vegetables at relatively low prices in the dietary of the average American family has been made possible also by reductions in marketing costs through improvements in transportation facilities and greater efficiency in the handling of these products in terminal markets. The use of the high-speed motor truck has effected savings to both producers and consumers by widening the distribution of winter vegetables to smaller towns and cities.

GUSTAVE BURMEISTER.

United States: Exports and Imports of Specified Agricultural Commodities, Average 1924-29, Annual 1938 and 1939, and December 1938 and 1939

Commodity	Unit	Year ending December 31			December	
		Average 1924-29	1938	1939 pre- liminary	1938	1939 pre- liminary
Exports:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Pork ¹	Pound..	425,311	95,633	129,543	9,059	17,392
Lard, includes neutral.....	Pound..	788,210	204,603	277,272	19,198	18,917
Wheat, includes flour.....	Bushel..	184,854	111,409	99,626	6,891	2,485
Apples, fresh ²	Pound..	14,100	11,761	8,379	1,673	338
Pears, fresh.....	Pound..	63,245	177,134	97,193	28,467	6,640
Tobacco, leaf.....	Pound..	521,802	472,864	327,216	52,283	26,557
Cotton, excludes linters (500 pounds).....	Bale.....	8,474	4,577	4,819	388	849
Imports: ³						
Cattle.....	Number	338	434	784	40	20
Beef, canned, includes corned.....	Pound..	⁴ 37,271	78,597	85,863	6,819	3,351
Hides and skins, agricultural.....	Pound..	⁵ 426,062	179,315	321,009	25,500	33,151
Barley malt.....	Pound..	⁶ 888	102,576	101,130	7,775	5,016
Sugar, excludes beet (2,000 pounds).....	Ton.....	4,380	2,974	2,903	52	331
Flaxseed.....	Bushel..	19,832	15,364	16,028	1,474	623
Tobacco, leaf.....	Pound..	72,574	60,841	62,214	4,156	4,075
Wool, excludes free in bond.....	Pound..	⁶ 144,281	34,253	102,564	4,576	16,396

¹ Includes fresh, canned, and pickled pork, bacon, hams, shoulders, and sides.

² Includes barrels, baskets and boxes in terms of bushels.

³ General imports prior to 1938. Subsequently, imports for consumption.

⁴ Includes a small amount of "meats canned, other than beef."

⁵ Includes reptile and fish skins.

⁶ Imports for consumption.

Office of Foreign Agricultural Relations. Compiled from Monthly Summary of Foreign Commerce of the United States and official records of the Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1923-25=100) ¹	Income of Industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	Wholesale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in— ⁶				
					Living	Pro-duction	Living and production		
1925	104	98	101	151	164	147	157	176	270
1926	108	102	102	146	162	146	155	179	271
1927	106	100	100	139	159	145	153	179	277
1928	111	100	99	141	160	148	156	179	279
1929	119	107	99	139	158	147	153	180	281
1930	96	88	96	126	148	140	145	167	27
1931	81	67	88	107	126	122	124	130	27
1932	64	46	79	95	108	107	107	96	218
1933	76	48	76	96	109	108	109	85	187
1934	79	61	78	109	122	125	123	95	178
1935	90	69	80	117	124	126	125	103	180
1936	105	80	81	118	122	126	124	111	182
1937	110	94	84	126	128	135	130	126	187
1938	86	73	82	115	122	124	122	124	186
1939 ⁷	105	83	82	113			121	124	
1939—January	101	80	82	112			120	117	
February	99	79	82	112			120		
March	98	79	82	112	119	122	120		
April	92	75	82	111			120	121	
May	92	75	81	111			120		
June	98	80	81	110	119	121	120		
July	101	80	81	110			120	126	
August	103	83	81	109			119		
September	111	86	82	115	122	123	122		
October	121	91	82	116			123	126	
November	124	93	82	116			122		
December	126	93	82	116			122		
1940—January				116			122	119	

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio of prices received to prices paid	
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Ment animals	Dairy products	Chick-ens and eggs		All groups
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	163	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1939-January	66	71	76	98	112	109	97	94	78
February	66	70	78	105	116	107	91	92	77
March	66	71	81	110	116	100	88	91	76
April	67	70	82	95	114	95	87	89	74
May	72	72	85	88	112	92	85	90	75
June	73	73	93	105	107	94	83	89	74
July	68	73	89	99	107	96	89	89	73
August	64	71	70	99	101	100	90	88	74
September	83	76	73	117	117	107	102	98	80
October	77	74	73	128	112	112	106	97	80
November	79	76	66	123	107	117	117	97	80
December	87	82	65	96	101	118	97	96	79
1940-January	90	85	66	117	103	119	91	99	81

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real-estate taxes per acre. Base period represents taxes levied in the calendar years 1909-12, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

THE AGRICULTURAL SITUATION

MARCH 1940

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EUROPEAN WAR has not stimulated—it has diminished—the export demand for farm products. United States exports of tobacco and fruits have been greatly reduced—exports of pork and lard are not up to the volume that would flow normally in a year of large production and low prices—export sales of cotton have been good but have declined recently—little wheat is going abroad. (See table on page 8 for volume of exports during the first 5 months of the war compared with the like period a year earlier.) * * * Principal effects of the war have been to increase domestic demand for farm products through increased industrial production in anticipation of war requirements. This has helped to support prices of some farm products and the income of farmers during recent months. The outlook is less propitious now that industrial production has declined. * * * There seems little in the picture now that would justify any expansion in farm production this year in excess of domestic—plus limited export—needs for foods and fibers.

Commodity Reviews

DEMAND: Downturn

CHANGES in conditions affecting the domestic demand for farm products have been adverse since the turn of the year in contrast to the sharp improvement of late 1939. Though the relapse in industrial activity is regarded as temporary some further decline is expected before the downward trend is reversed.

The tendency of changes in consumer income to lag behind and be less pronounced than changes in industrial production, and the effect of weather conditions in restricting current supplies of some farm products, have prevented any general reflection of the industrial downturn in farm product prices. However, industrial commodity prices have receded along with the downward slant in industrial production and similar pressure on prices of some farm products may be noticeable before industrial activity again turns upward.

The present downward trend in conditions affecting the domestic demand for farm products is a natural aftermath of the period of feverish industrial activity necessitated in filling the heavy orders booked immediately following the outbreak of war in Europe. A large portion of such orders has now been filled and customers' inventories have thereby become sufficiently large to protect them more adequately against possible major war-time price advances.

It is important in viewing future demand prospects to keep in mind that the principal inducement which caused business men to place advance orders last fall—possibility of a major war-inspired commodity price advance—is still in the picture. While this remains true it is probable that inventories will be maintained somewhat above levels which would be considered safe in the absence of war. Abandonment of this policy on any large scale could result in a more pro-

nounced and prolonged decline in industrial production than is now anticipated.

Though steel mills have cut schedules rather drastically since December and construction contracts awarded have declined, automobile production and cotton consumption have been of record high proportions. Some readjustment in cotton textiles will be necessary unless new orders appear in better-than-expected-volume shortly, but the automobile outlook is more satisfactory. P. H. BOLLINGER.

INCOME: Increase

Cash farm income from marketings and Government payments was smaller in January than in December, but considerably larger than in January last year. The increase from a year ago resulted from higher prices of farm products, a larger volume of marketings, and increased Government conservation and price parity payments. Large quantities of corn were placed under Government loan in January, and more than 13 million bushels of wheat under loan were redeemed for sale by farmers at prices averaging about 15 cents a bushel above loan values.

February income also was probably larger than in February last year when prices of farm products were declining. Continuation of farm products prices around current levels would mean larger farm income in the first 6 months of 1940 compared with the like period of 1939. Cash farm income from marketings and Government payments in the first 6 months of 1939 totaled 3,533 million dollars.

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
January:			
1940.....	607	126	733
1939.....	593	41	634
1938.....	643	17	660

PRICES: Disparity

Prices of principal farm products in February continued below the levels that would give farmers a purchasing power equivalent to that in 1910-14. The average of prices received by farmers was around the pre-World War level of 100, but prices paid by farmers for commodities used in production and for living averaged 122 percent of the base period.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1939			
February.....	92	120	77
March.....	91	120	76
April.....	89	120	74
May.....	90	120	75
June.....	89	120	74
July.....	89	120	74
August.....	88	119	74
September.....	98	122	80
October.....	97	122	80
November.....	97	122	80
December.....	96	122	79
1940			
January.....	99	122	81
February.....	101	122	83

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by producers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of districts and States.

Product	5-year average, August 1909-July 1914	February average, 1910-14	February 1939	January 1940	February 1940	Parity price, February 1940
Cotton, lb.....cents	12.4	12.3	8.2	10.1	9.97	15.87
Corn, bu.....do	64.2	60.1	43.9	53.2	54.7	82.2
Wheat, bu.....do	88.4	89.2	56.9	84.5	84.1	113.2
Hay, ton.....dollars	11.87	12.02	6.78	7.90	8.10	15.19
Potatoes, bu.....cents	69.7	66.3	64.6	74.0	75.2	86.5
Oats, bu.....do	39.9	39.8	26.2	36.3	37.7	51.1
Soybeans, bu.....dollars	(¹)	(¹)	.69	1.01	.96	-----
Peanuts, lb.....cents	4.8	4.9	3.4	3.56	3.60	6.1
Beef cattle, cwt.....dollars	5.21	5.11	6.86	6.94	6.84	6.67
Hogs, cwt.....do	7.22	7.12	7.21	5.18	4.97	9.24
Chickens, lb.....cents	11.4	11.1	14.2	12.0	12.2	14.6
Eggs, doz.....do	21.5	23.7	16.7	18.3	20.2	30.6
Butterfat, lb.....do	26.3	27.4	24.9	30.0	29.7	34.4
Wool, lb.....do	18.3	18.5	20.2	28.1	27.8	23.4
Veal calves, cwt.....dollars	6.75	6.77	8.73	8.95	8.80	8.64
Lambs, cwt.....do	5.87	5.95	7.37	7.57	7.61	7.51
Horses, each.....do	136.60	137.00	83.10	78.30	78.20	-----

¹ Prices not available.

² Adjusted for seasonality.

The last column in the accompanying table—Prices of Farm Products—shows the prices that farmers would have to receive to give them a purchasing power equivalent to that in the pre-war period. Wide disparities in the average of prices actually received in February are shown for cotton, corn, wheat, hogs, and eggs.

The only products selling higher than "parity" in February were wool, lambs, beef cattle and veal calves.

WHEAT: A Dollar Again

Wheat prices strengthened in late February and again topped a dollar in domestic markets. Principal factors were an increased demand for wheat and flour, renewed concern over poor United States winter wheat prospects, and the likelihood of cold weather damage to wheat in Europe. It was reported that the Argentine crop would be the smallest since 1916.

No. 2 Hard Winter wheat was selling at 104 cents a bushel in Kansas City on February 23, compared with about 95 cents a bushel at the beginning of the month, and with 99 cents on January 15. No. 1 Dark Northern Spring wheat averaged 108 cents per bushel

on February 23, compared with about 101 cents on February 1, and with 103 cents on January 15.

Gulf prices of Hard Winter wheat continued about 25 cents per bushel above export parity, and prices of domestic spring wheat at Buffalo were only about 13 cents lower than approximately the same quality of Canadian wheat, c. i. f., duty paid, at Buffalo.

Stocks of wheat in the United States on January 1 totaled 615 million bushels compared with 654 million bushels on the same date last year. Exports of wheat and of flour made wholly of United States wheat totaled 30 million bushels for the July-December period, compared with 46 million bushels in the same months of 1938. Domestic disappearance during this period was 364 million bushels compared with 385 million bushels a year earlier.

COTTON: Prices Up

Cotton prices during February regained much of the January decline, and the average for 10 spot markets on February 29 was 10.89 cents for Middling $1\frac{1}{8}$ inch, compared with 10.49 cents a month earlier, and with 8.96 cents on February 28 last year. Principal supporting factors were the continued high level of domestic consumption and the large volume of exports.

Exports totaled 560,000 bales in the first 3 weeks of February as contrasted with 190,000 bales in the like period last year. Exports in January had totaled more than 1,000,000 bales—the largest for that month since January 1927. Exports for the first half of the 1939-40 season approximated 4,160,000 bales, compared with 2,192,000 bales in the like period of 1938-39, and with 3,832,000 bales in 1937-38.

Domestic mill consumption continues at an unusually high rate despite some slackening since the beginning of 1940. Consumption in January, totaling 730,000 bales, was the highest

on record for that month. Total for the first half of the 1939-40 season was 4,042,000 bales, compared with 3,397,000 bales in the same period a year earlier, and with 3,022,000 bales average in the preceding ten years.

Domestic consumption may decline in the next few months, but the total for 1939-40 is expected to be close to the high record of 7,950,000 bales established in 1936-37.

LIVESTOCK: Inventory

Expansion of the livestock industries during the last 2 years was reflected in January 1 inventories showing total numbers of beef cattle, milk cows, sheep, hogs, chickens, and turkeys on farms the largest in several years. Continued decreases in numbers of horses and mules were reported.

Beef cattle, milk cows, and sheep averaged higher in farm value this January 1 than a year earlier. Other livestock — hogs, chickens, turkeys, horses, and mules — averaged lower. The combined value of all was computed at 5.182 billion dollars, compared with 5.163 billion in 1939, and with 4.656 billion average for the 10 years 1929-38.

Hogs showed the largest increase in numbers and the biggest decline in value during the past year. There were 58.3 million hogs valued at 454.3 million dollars this January 1, compared with 49.3 million hogs valued at 552.6 million dollars a year earlier. Average for 1929-38 was 51.9 million hogs valued at 479.8 million dollars.

All cattle, estimated at 68.8 million head, were valued at 2.790 billion dollars, compared with 66.8 million head valued at 2.568 billion dollars in 1939. Average for 1929-38 was 66.3 million head valued at 2.218 billion dollars. Sheep totaled 54.5 million head valued at 342.9 million dollars on January 1, compared with 53.8 million head valued at 309.3 million dollars in 1939, and with 52.3 million head valued at 299.3 million dollars average for 1929-38.

CATTLE: Marketings Up

Feature of the cattle situation in recent months has been the increased marketings of short-fed cattle. This reflects partly the high price of feed in relation to cattle prices. Feed prices in general are higher than at this time last year. Since cattle prices are not correspondingly higher, it appears that returns from cattle feeding will be less favorable in the first half of 1940 than in the like period of 1939.

BAE reported in late February that although the stronger consumer demand for meats in 1940 than in 1939 will be a strengthening influence to prices on all kinds of slaughter cattle, the effects of this upon cattle prices will be offset or more than offset by the larger total meat supplies. Many more cattle were on feed in the Corn Belt and Western States this January 1 than last.

For the last 2 years there has been an increasing tendency to hold back breeding stock on farms and ranches to increase cattle numbers. The result was that in 1939 steer slaughter was larger than cow and heifer slaughter for the first time in 6 years. Possibility of a continued decrease in marketings of cows and heifers is seen this year, provided range and feed conditions are favorable.

The strong demand for stocker and feeder cattle was a strengthening factor in the price of lower grades of slaughter cattle during the past year. This demand may not be so strong in 1940.

HOGS: Prices Down

Hog prices declined and corn prices advanced during the past month—continuing an unfavorable price ratio that is being reflected in the marketing of lighter weight hogs. In early February the hog-corn price ratio at Chicago was 8.9, compared with 15.8 a year earlier. The average for the past 20 years is about 11.6. A ratio below this figure generally discourages the feeding of corn to hogs.

Slaughter supplies of hogs have been declining seasonally, but marketings are much larger than at this time last year. Seasonal increases in marketings will be registered again in late spring and early summer when the movement of last fall's pigs gets under way in large volume. The 1939 fall pig crop was 16 percent larger than the fall pig crop of 1938.

Consumer demand for meats during late spring and early summer may be below current levels, but above those of a year earlier. A big question is whether the better demand this summer than last will offset the larger volume of marketings. Another big question is the volume of exports of pork and lard. It was reported last month that Great Britain had suspended purchases of bacon and hams from the United States. A quota on Canadian imports of fresh pork from the United States recently was adopted by the Canadian Government.

LAMBS: Spring Prospects

Early lambs were developing rapidly in late February with prospects that shipments from California would be later this spring than last when poor pastures forced early marketings. Some loss of early lambs in January was reported in Texas because of unfavorable weather, but spring feed prospects are favorable.

Meanwhile, it is expected that marketings of fed lambs during the remainder of the fed-lamb marketing season ending about May 1 may be no larger than in the like period of 1939. The number of lambs left in feed lots in western feeding areas was about 10 percent smaller in early February this year compared with last. A major part of the movement of fed lambs from the Corn Belt was about completed during February.

Slaughter supplies of sheep and lambs have been somewhat larger this winter than last, but prices were supported by a stronger demand for meats and by higher prices for wool

than a year earlier. Marketings of fed lambs also were larger than a year earlier, reflecting chiefly the increase in the number fed in the Corn Belt.

WOOL: New Season

A new wool marketing season begins on April 1 under more favorable conditions than at the same time last year. The carryover of wool is smaller this season than last, consumer demand is better, prices are higher. An uncertain factor is the volume of wool mill consumption in 1940. Mill consumption was unusually large in 1939, and may be smaller this year.

Chief market interest in recent months has been in foreign wools. Production in Australia has been estimated at 1,090 million pounds—the largest on record for that country—for the 1939-40 season which ends on June 30 next. In late January the British Wool Control increased from 22.5 million pounds to 37.5 million pounds the allotments of Australian wool available to United States importers.

United States production of wool has not changed much in recent years and in 1939 totaled approximately 440 million pounds. Supplies were supplemented by heavy imports last year to meet the requirements of mills in a volume of consumption which was the heaviest—except in 1935—in more than 20 years. Stocks of wool in the United States were unusually small at the end of 1939, but imports since then have been large.

OILSEEDS: Prices Up

Oilseeds—cottonseed, soybeans, flaxseed, and peanuts—continue higher priced than at this time a year ago. Principal factors have included the sharp rise in prices of high-protein cake and meal and cotton linters, and strength in prices of linseed oil. Soybean-oil prices were slightly higher early this year than last, but cottonseed-oil prices were lower.

Prospects are that acreages of soybeans, flaxseed, and peanuts will be increased this year, since prices compare favorably with those for competing crops. Increased production of soybean oil and peanut oil would have a depressing effect on prices of food fats and oils; increased output of flaxseed would also tend to depress prices unless the Argentine crop should be small. Surveys in February revealed sharp increases in California and Arizona acreages of flaxseed planted for harvest in 1940.

United States production of fats and oils from domestic and imported materials in 1939—totaling about 9.1 billion pounds—was the largest on record. Nearly 8.4 billion pounds were produced from domestic materials, compared with 8.0 billion in 1938. Consumption of fats and oils exceeded all previous figures, and the supply now on hand is slightly smaller than the high record stocks at this time a year ago.

TRUCK CROPS: Prices Up

Market prices of most vegetables rose sharply as supplies were reduced by the January freeze in Florida and Texas. The only products which failed to share in the advance were carrots, cauliflower, celery, kale, and western lettuce. Most of these crops are produced largely in California in winter and were not affected by the freeze.

Rapid progress in replanting some of the lost acreages in the South was reported in February, but the crops will be late and supplies during March and April will be smaller than in these months last year. Supplies through May, however, may be unusually heavy if the weather is favorable.

Reports in mid-February put the winter crop of snap beans in Florida 55 percent below 1939 figures; production of beets in Texas about 31 percent smaller than in 1939; and early-crop cabbage in California, Florida, and Texas about 19 percent below 1939.

The winter crop of peppers in Florida was cut to 40,000 bushels compared with 1,000,000 bushels produced last year. Production of spinach in the early States was indicated about 16 percent smaller than in 1939.

POTATOES: New Crop

New crop potatoes have been rolling to market at sharply higher prices due to the freeze in south Florida which reduced production prospects more than 650,000 bushels. Market supplies of new potatoes will be much smaller this season than last, until about the middle of April when the north Florida crop becomes available.

Total stocks of 1939 crop potatoes of about 103,000,000 bushels on January 1 were about the same as on that date last year. A reduction of 3,300,000 bushels in the Central late and intermediate States is about offset by an increase of 2,400,000 bushels in the Western States and about 700,000 in the Eastern States.

FRUITS: Supply Reduced

The fruit supply situation has changed markedly in the last 6 weeks. The available supply of citrus fruits is about a third smaller than at this time last year, and of apples and pears slightly smaller than in 1939 despite the sharp reduction in exports this season. Prices of all fruits are considerably higher than they were early in the current season.

Citrus: The citrus crops in Florida and Texas were damaged badly by the January freeze, but prospects for navel oranges and lemons in California were improved. February citrus crop estimates for all States were: Oranges 71 million boxes, compared with 79 million from the bloom of 1938, and with 54 million average for 1928-37; grapefruit 31 million boxes, compared with 44 million in 1938, and with 19 million average for 1928-37.

Apples: Apples have been moving out of cold storage in large volume

despite sharply curtailed exports, stimulated by the Government purchases of apples for distribution to persons on relief. February cold storage holdings estimated at 20.3 million bushels were slightly smaller than at the same time a year ago. The Government purchase program was continued in February but in diminished volume in view of the sharp reduction in citrus supplies and the improved prices of apples.

Pears: Relatively large quantities of pears have moved out of storage despite curtailed exports, stimulated by Government relief purchases, the supply situation as to other fruits, and the improved consumer purchasing power this winter compared with last. February stocks totaled 716,000 boxes, compared with 879,000 boxes in 1939, and with 632,000 boxes average for 1935-39.

DAIRY: More Cows

Milk production was adversely affected by the freezing weather in mid-winter but is expected to continue relatively large during the remainder of the feeding period as compared with the average of recent years. There are more cows on farms this winter than last. Feeding has been heavy despite higher prices of feed this winter.

The number of milk cows (cows and heifers two years old and over kept for milk) totaled 25.3 million head on January 1, compared with 25.1 million on the same date last year, and with 24.9 million average for 1929-38. The number of yearling heifers kept for milk cows was 5.4 million head compared with 5.1 million in 1939, and the number of heifer calves being kept for milk cows was 5.654 million head compared with 5.684 million in 1939.

A sharp seasonal decline in butter prices occurred during the past month, nevertheless prices are still decidedly higher than at this time a year ago, due to the relatively low level of storage stocks and the general economic improvement in the past year. Cold

storage holdings of butter by Government agencies and the trade on February 1 was the smallest for that date since 1936. Total was 29 million pounds, compared with 111 million pounds on February 1 last year, and with 45 million pounds average for 1935-39.

EGGS: Production Up

Records of receipts of eggs at principal markets indicate that egg production is increasing rapidly from the low level caused by the generally cold weather of late January and part of February. Production of eggs per flock was about 25 percent smaller this February 1 than last, due almost entirely to smaller production per hen. Culling of flocks was unusually heavy during January, so that there were about the same number of layers in farm flocks this February 1 as last.

Prices of eggs advanced sharply as production and marketings declined during the cold weather of January-February. The average of prices to farmers was 20.2 cents per dozen on February 15, compared with 18.3 cents on January 15, and with 16.7 cents on February 15 a year ago. Farm prices of chickens averaged 12.2 cents per pound on February 15, compared with 12.0 cents on January 15, and with 14.2 cents on February 15 a year ago.

Besides the number of laying hens in farm flocks on February 1, there was an unusually large number of pullets not yet of laying age. These pullets may provide the basis for increasing laying flocks in coming months. Crop correspondents reported as of February 1 their intentions to buy about 4 percent fewer baby chicks this year than last.

FRANK GEORGE.

United States: Exports and Imports of Specified Agricultural Commodities, January, 1939 and 1940, and September-January 1938-39 and 1939-40 ¹

Commodity	Unit	January		September-January	
		1939	1940 Prel.	1938-39	1939-40 Prel.
Exports:					
Pork:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Cured pork ²	Pound.....	4,953	12,445	25,374	31,033
Other pork ³	Pound.....	3,492	16,142	16,161	88,011
Total pork.....	Pound.....	8,445	28,587	41,535	69,044
Lard, including neutral.....	Pound.....	28,520	27,988	103,589	116,396
Wheat, including flour.....	Bushel.....	12,619	2,650	37,513	19,612
Apples, fresh ⁴	Bushel.....	2,396	244	8,105	2,297
Pears, fresh.....	Pound.....	5,370	3,230	127,085	71,910
Tobacco, leaf.....	Pound.....	26,866	33,941	271,931	158,937
Cotton, excluding linters (500 pounds).....	Bale.....	303	1,086	2,107	4,176
Imports:					
Cattle.....	Number.....	116	70	265	243
Beef, canned including corned.....	Pound.....	4,365	8,452	30,897	37,722
Hides and skins ⁵	Pound.....	32,656	30,116	118,373	139,861
Barley malt.....	Pound.....	6,344	4,728	38,512	29,510
Sugar, cane (2,000 pounds).....	Ton.....	71	191	836	1,241
Flaxseed.....	Bushel.....	2,111	826	7,878	3,456
Tobacco, leaf.....	Pound.....	4,765	5,520	23,512	25,810
Wool, excluding free in bond for use in carpets, etc.....	Pound.....	6,334	24,990	23,443	75,193

¹ Corrected to Feb. 28.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, frozen, pickled, salted, and canned.

⁴ Includes boxes, baskets, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Source: Office of Foreign Agricultural Relations. Compiled from official records of the Bureau of Foreign and Domestic Commerce.

Farm-Mortgage Interest Charges

FARM-mortgage interest charges for the year 1938 are estimated at \$357,000,000, which is about 3.4 percent less than for 1937 and almost 40 percent less than for 1928. The interest charges for 1938 were only slightly more than half the total for 1922-23, the peak years of farm-mortgage interest charges, and represent the lowest figure for any year since 1916, when the total was \$341,000,000. Present indications are that the total farm-mortgage interest charges for 1939 were little changed from 1938.

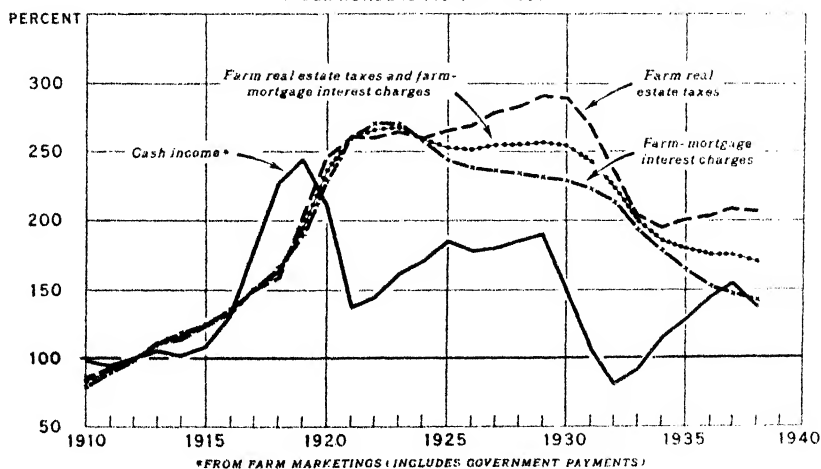
The accompanying chart shows the trend of farm-mortgage interest charges in relation to the trends of farm real-estate taxes and cash farm income for the period 1910-38. All three series rose sharply in the decade 1910-20, but in the next 2 decades the trends were quite different. Cash farm income fell abruptly in 1920 and 1921, whereas interest charges rose rapidly until 1922. Interest charges on farm mortgages rose in 1920, 1921, and 1922 mainly as a result of the post-1920 rise in farm-mortgage debt, although the level of interest rates rose also during this period. As the post-

1920 rise of interest charges also reflected the funding of non-real-estate debt into real estate secured debt, a part of the increase in mortgage interest charges in these years represented a corresponding deduction from the interest charges on non-real-estate debt.

THE decline of interest charges from 1923 to 1933 reflected mainly the downward trend of outstanding farm-mortgage debt although for the country as a whole the average interest rate on farm mortgages declined moderately during this period. Interest charges on farm mortgages declined somewhat more rapidly in the period 1929-32 than in the years immediately preceding, but the decline was very small in comparison with that for cash farm income. After 1933 interest-rate reductions as well as declining farm-mortgage debt contributed heavily to the decline of farm-mortgage interest charges. The large-scale refinancing program of the Farm Credit Administration resulted in substantial interest-rate reductions, and, in addition, borrowers from the Federal

ESTIMATED FARM MORTGAGE INTEREST CHARGES, FARM REAL ESTATE TAXES, AND CASH FARM INCOME FROM FARM MARKETINGS, 1910-38

INDEX NUMBERS (1910=14=100)



land banks and the Land Bank Commissioner benefited by the further reductions of interest rates below the contract rate as provided for in the Emergency Farm Mortgage Act of 1933 and subsequent legislation. Also the rates charged by private lenders declined in this period. In 1938 the average interest rate payable on all outstanding farm mortgages was about 5 percent as compared with about 6 percent in 1930 and 6.4 percent in 1923.

In the interpretation of the trends of farm-mortgage interest charges in relation to the trends of cash farm income and farm real-estate taxes, certain characteristics of each of the series should be borne in mind. The interest series represents the amount payable by the borrower during the year, and not the amount actually paid. Some of the annual interest charges not paid when due become an addition to the mortgage debt, which may be paid later in the form of principal payments. Some delinquent interest is merely postponed and paid later. Other delinquent interest never is paid in full. Accordingly, a series showing interest paid would be somewhat different from the series shown here for interest payable, especially in periods of widespread default and in the years immediately following. It should be noted also that the interest figures used for the Federal land banks and the Land Bank Commissioner for the period 1933-38 represent the amount of interest accrued at the contract rate less the interest reduction granted borrowers for which reimbursement was obtained from the Secretary of the Treasury.

The series for cash-farm income includes direct Government adjustment, conservation and parity payments for the period 1933-38. The tax series represents levies, and in this respect is comparable with the interest series showing the amount of interest payable. It should be observed, however, that the income and tax series refer to all farms, whereas the interest

series refers to mortgaged farms. This difference is especially important in periods of rapid change in the proportion of farms under mortgage. It is important also when comparisons are made of the absolute amounts in the three series.

THE total of farm-mortgage interest charges is relatively small in relation to total cash income for all farms, but the ratio of mortgage interest to cash income has varied widely over the last 30 years (table 1). In 1938 mortgage interest was 4.4 percent of total cash income as compared with

Table 1.—Estimated Amount of Farm-Mortgage Interest Charges and Cash Farm Income, 1910-38

Year	Farm-mortgage interest charges ¹	Cash farm income ²	Percent farm-mortgage interest charges of cash farm income	Index (1910-14=100)	
				Farm-mortgage interest charges	Cash farm income
	Million dollars	Million dollars	Percent	Percent	Percent
1910....	203	5,785	3.5	81	98
1911....	225	5,581	4.0	90	94
1912....	252	5,966	4.2	100	101
1913....	276	6,251	4.4	110	106
1914....	296	6,015	4.9	118	102
1915....	314	6,391	4.9	125	108
1916....	341	7,755	4.4	136	131
1917....	378	10,648	3.5	161	180
1918....	417	13,464	3.1	166	227
1919....	476	14,436	3.3	190	244
1920....	574	12,553	4.6	229	212
1921....	653	8,107	8.1	260	137
1922....	680	8,518	8.0	271	144
1923....	679	9,524	7.1	271	161
1924....	647	10,150	6.4	268	171
1925....	612	10,927	5.6	244	185
1926....	598	10,529	5.7	230	178
1927....	593	10,699	5.5	237	181
1928....	600	11,024	5.4	235	186
1929....	582	11,221	5.2	232	190
1930....	572	8,883	6.4	228	150
1931....	559	6,293	8.9	223	106
1932....	534	4,682	11.4	213	79
1933....	483	5,409	8.9	193	91
1934....	446	6,720	6.6	178	114
1935....	411	7,542	5.4	164	127
1936....	385	8,499	4.5	153	144
1937....	370	9,111	4.1	148	154
1938....	357	8,109	4.4	143	137

¹ Contract amount payable for all years except 1933-38. Interest payable on Federal land bank and Land Bank Commissioner loans for the years 1933-38, represents total interest accrued at the contract rates of interest less the amounts of interest reduction granted borrowers by these agencies for which reimbursement was obtained from the Secretary of the Treasury.

² Cash income from farm marketings plus Government payments.

11.4 percent in 1932, 5.2 percent in 1929, and 8.1 percent in 1921. A more significant relationship would be the ratio of mortgage interest payable to cash income from mortgaged farms. Since probably only about one-third of the farms in the United States are mortgaged (34.5 percent as of January 1, 1935), it is likely that mortgage interest in 1938 was around 12 to 15 percent of cash income for mortgaged farms. In 1932 this percentage may well have been from 30 to 35 percent of the cash income from mortgaged farms. Exact comparisons on this basis are not possible, since separate estimates of cash income for mortgaged farms have not been made.

In 1938 total interest reductions granted Federal land bank and Land Bank Commissioner borrowers for which these agencies were reimbursed by the Secretary of the Treasury amounted to almost \$39,000,000, and total contract interest charges for all farm-mortgage debt, before taking account of the interest reduction, amounted to about \$396,000,000 (table 2). The interest reductions granted borrowers by these two agencies thus represent a reduction of about 10 percent in the total contract interest charges on farm mortgages for 1938. For the borrowers from the Federal land banks and the Land Bank Commissioner alone the reduction is, of course, substantially greater. For these

borrowers the reductions amounted to approximately 28 percent.

ALTHOUGH the contribution to the net income position of farmers resulting from the interest reduction granted borrowers amounted to only \$39,000,000 in 1938 as compared with direct Government payments amounting to \$482,000,000, it should be noted that the interest reductions were distributed among a much smaller group of farmers. The interest reductions are received by only a fraction of the owners of mortgaged farms, whereas the direct Government payments are paid on both mortgaged and debt-free farms. Since only about one-third of all farms are mortgaged, and since less than 40 percent of the farm-mortgage debt is owed to the Federal land banks and Land Bank Commissioner, it may be reasonable to assume that about one-seventh of the direct Government payments for 1938 were paid on farms on which these lending agencies held the mortgages. For 1939 the interest reduction granted Federal land bank and Land Bank Commissioner borrowers amounted to about \$37,000,000 and Government payments amounted to \$675,000,000, indicating that as compared with 1938 the interest reductions represented a relatively smaller part of the total benefit received by these borrowers than in 1938.

Table 2.—Interest Reductions Granted Borrowers on Federal Land Bank and Land Bank Commissioner Loans for Which Reimbursement was Obtained From the Secretary of the Treasury and Government Payments, 1933-39

Year	Interest reductions			Total contract interest charges on all farm mortgages ¹	Percent interest reduction of total farm mortgage interest charges	Government payments ²
	Federal land bank	Land Bank Commissioner	Total			
	Million dollars	Million dollars	Million dollars	Million dollars	Percent	Million dollars
1933.....	1.3		1.3	484.6	0.3	131.0
1934.....	11.1		11.1	456.6	2.4	447.0
1935.....	18.2		18.2	429.2	4.3	573.0
1936.....	30.6		30.6	415.2	7.4	287.0
1937.....	32.4	3.6	36.0	405.6	8.9	367.0
1938.....	30.9	8.0	38.9	396.0	9.8	482.0
1939.....	29.4	7.3	36.7			675.0

¹ Contract interest charges payable (including amounts paid by the Secretary of the Treasury to reimburse the Federal land banks and Land Bank Commissioner for interest reductions granted borrowers).

² Direct Government adjustment, conservation, and parity payments.

Another significant comparison which can be made on a very rough basis only is the relation of the Government payments on farms mortgaged to the Federal land banks and the Land Bank Commissioner to the mortgage interest charges on such farms. For 1938 interest payable by borrowers on this debt amounted to about \$102,000,000. Assuming that perhaps one-seventh of the Government payments was made on farms mortgaged to these agencies, the amount of the Government payments on these farms would be around \$70,000,000. Since the mortgage-interest charges for 1939 on farms mortgaged to these agencies were

slightly less than in 1938, and the Government payments for 1939 were much larger, it is possible that the Government payments for 1939 on these farms were sufficient in the aggregate to pay the reduced mortgage interest charges.

DONALD C. HORTON.

[The data on farm-mortgage interest charges in table 1 represent a revision of the Department's estimates for the entire period, 1910-38. The revision is based on the new estimates of outstanding farm-mortgage debt which appeared in the October 1939 issue of *The Agricultural Situation* and on new data on farm-mortgage interest rates obtained in a Nation-wide W. P. A. project sponsored by the Bureau of Agricultural Economics.]

Soybeans: New Problem

THE rapid increase in soybean production in the United States during the past 6 years has provided many farmers with a new cash crop, and other farmers with valuable hay, forage, and green-manure crops. On the other hand, the greater soybean production has materially increased the domestic surplus of edible fats and oils, and has been an important factor depressing prices of lard and cottonseed oil.

From 1924 to 1933, soybean acreage increased from about 2 million to 4 million acres; about 10 million acres were harvested in 1939. Forty-four percent of the 1939 acreage was cut for hay, beans were gathered from 42 percent of the acreage, and the remaining acreage was grazed by livestock or plowed under as green manure. Production of soybeans as beans has increased even more sharply than acreage. Approximately 5 million bushels of beans were harvested in 1924, 13 million bushels in 1933, and 87 million bushels in 1939.

In the four States where the greatest increases in soybean acreage have taken place—Ohio, Indiana, Illinois, and Iowa—soybean acreage has tended

to take the place of land previously planted to oats and corn. These four States in 1939 accounted for 61 percent of the total soybean acreage and 91 percent of the beans harvested.

THE marked increase in the production of soybeans in the Corn Belt has been conditioned by several factors. These include the ability of the soybean plant to withstand drought, its relative freedom from pest hazards, its adaptability to crop rotations, the possibility of harvesting the beans with the small combine, and the fact that soybeans provide an additional source of cash income for many farmers. The necessity for finding a more profitable crop than oats, and in some cases corn, has been important in bringing about increased soybean production. In the South, where cotton acreage has been reduced considerably in recent years, soybeans, harvested mostly for hay, forage, and as a green-manure crop, also have been useful for replacement purposes.

Although the soybean is a legume, it is considered under the Agricultural Conservation Program to be soil-

depleting in the North Central and Western States when the beans or seeds are allowed to ripen and are harvested. The plant is considered nondepleting when used for other purposes. It has distinct soil-building characteristics when plowed under as a green-manure crop. Beginning in 1936, the Agricultural Adjustment Administration has encouraged this practice by including it as one basis for making conservation payments to farmers except in cases where the beans are first harvested by machinery. The use of soybeans as a green-manure crop, however, has accounted for only a small part of the total increase in soybean acreage in recent years.

SOYBEANS grown in this country, when milled, yield about 80 percent of their weight in high-protein cake and meal, useful primarily as a concentrated livestock feed and also for making vegetable glues and plastics. In addition, the domestic soybean yields 14-16 percent of its weight in edible oil, which is similar in many respects to cottonseed oil and lard.

During 1939, the crushing capacity of mills located in commercial soybean areas was expanded sharply; it is estimated that such mills are now capable of crushing 80 million bushels of soy-

beans annually. But making allowance for seed requirements and exports, it seems unlikely that crushings during the current season will account for more than 60 million of the 87 million bushels produced in 1939. If 60 million bushels of soybeans are crushed, approximately 2,880 million pounds of cake and meal, and 560 million pounds of oil, would be produced. Such production would be, by far, the largest on record.

Prices of soybeans during the current marketing season, which began last October, have been high considering the size of the crop being marketed. The average price received by farmers for soybeans during the first 5 months of the season (October-February) was 90 cents per bushel, nearly 35 percent higher than in the corresponding period a year earlier. Soybean-meal prices at Chicago were up in nearly the same ratio. But prices of soybean oil averaged only slightly higher than the comparatively low prices that prevailed during the first 5 months of the 1938-39 season.

INCREASED production and crushings of soybeans have intensified the problem of making profitable disposition of the growing surplus of food fats and oils produced in this country.

Production, Disposition, and Products Obtained From Crushings of Soybeans; and Production of Lard and Cottonseed Oil in the United States, Average 1924-33, Annual 1934-39

Year beginning October	Soybeans produced	Disposition of soybeans			Products obtained from crushings ¹		Lard pro- duced ⁴	Cotton- seed oil pro- duced ⁵
		Used for feed or seed ¹	Ex- ported ²	Crushed ³	Cake and meal	Oil		
	1,000 bushels	1,000 bushels	1,000 bushels	1,000 bushels	Million pounds	Million pounds	Million pounds	Million pounds
Average, 1924-33	9,760	7,357	461	1,942	94	16	2,334	1,545
1934	23,095	13,971	19	9,105	446	78	2,066	1,109
1935	44,378	18,707	3,490	25,181	1,200	209	1,267	1,164
1936	20,083	9,346	19	30,618	985	184	1,673	1,364
1937	45,272	13,594	1,368	30,310	1,432	279	1,441	1,961
1938	62,729	13,843	4,416	44,470	2,107	415	1,754	1,409
1939	⁶ 87,409							

¹ Production minus quantity crushed and exported.

² 1924-36, Bureau of Agricultural Economics Inspection Service; 1937 to date, Bureau of Foreign and Domestic Commerce.

³ Bureau of the Census. Production figures for cake and meal derived.

⁴ Calendar year. Agricultural Marketing Service.

⁵ Year beginning August. Bureau of the Census.

⁶ Preliminary.

Aside from butter, for which production in most years is about equal to consumption requirements, the principal food fats and oils produced in the United States are lard, cottonseed oil, and soybean oil. The chief outlet for cottonseed oil and soybean oil is in manufactured cooking fats; hence these oils compete directly with lard. Since prices of lard, cottonseed oil, and soybean oil, during 1939, were at the lowest levels in 5 or 6 years, the hog producer and the cotton grower, as well as the soybean grower, have a vital interest in the problem of surplus disposal. Despite fairly sharp gains last September, prices of lard and cottonseed oil in early 1940 have been somewhat lower than a year earlier.

THE United States normally produces a surplus of food fats and oils for export at prevailing world prices. During the period 1935-38, this country became, temporarily, a net importer of food fats as well as of technical fats, insufficient quantities of which are produced domestically. The shift in net trade position for food fats was largely the result of the relatively small domestic production of lard that followed the severe droughts of 1934 and 1936. By late 1939, domestic production had so far recovered from the effects of droughts that the United States had returned to its former position as a net exporter of food fats and oils (excluding edible fats used in nonfood products such as soap). But in the meantime, the foreign demand for American fats and oils had undergone a marked change.

For several years prior to 1934, 25 to 35 percent of our lard was exported. Nearly one-third of the total, or about 200 million pounds, usually went to Germany. Since 1933, Germany has taken very little American lard, and it is not likely that much if any will be taken by that country in the next few years. During the past few years, moreover, American lard has met increasing competition in the United Kingdom from foreign vegetable oils and from whale oil. It seems prob-

able, barring unforeseen events of war, that British requirements for American lard during the next few years will continue to be less than in the predrought period.

DOMESTIC lard production in 1940 will be nearly equal to production in the 10 predrought years, 1924-33, when an average of 2,334 million pounds was produced annually. With little likelihood that foreign markets will take as much lard as before 1934, the domestic market probably will have to absorb a larger-than-average quantity. On the other hand, production of cottonseed oil during the next few years is likely to continue 200 to 300 million pounds smaller than the 1,545 million pound average for the 10 marketing years prior to 1934. The reduction in cottonseed-oil supplies, together with increased domestic requirements resulting from population growth, would about offset the loss in export outlets for lard. However, soybean-oil production in 1940, and in subsequent years, is expected to total well over 500 million pounds compared with an average production of less than 20 million pounds annually during the 10 predrought years. In addition, several million bushels of soybeans will be available for export, but continued large exports after 1940 will depend upon the maintenance of the present favorable competitive position of American soybeans with Manchurian soybeans in European markets.

Although growth in population during the past 10 years has partly offset the increase in domestic supplies of lard and vegetable oils, per capita supplies of these products in the next few years probably will be much larger than they have been previously. Increased supplies per capita are likely to continue, as in 1939, to exert a depressing influence on prices of all domestic food fats and oils, and on prices of such farm products as hogs, cottonseed, and soybeans.

R. M. WALSH.

Feed-Egg Versus Egg-Feed

THE Department of Agriculture has always used the feed-commodity type of ratio for poultry products. Two feed-egg ratios are published by the Department. One of these, computed weekly, is based on wholesale egg and feed prices at Chicago. The other, computed once a month, is based on the estimated farm prices of eggs and feed as of the 15th of the month.

Both ratios show the number of dozen eggs required to purchase 100 pounds of a standard poultry ration. The ration used is composed of 62 pounds of corn, 14 pounds of wheat, 8 pounds of oats, 2 pounds of barley, 9 pounds of bran, and 5 pounds of tankage, the total equaling 100 pounds. Tankage was included instead of some other form of animal protein, such as meat scrap, because a long series of prices was not available for such a protein. This ration is not necessarily recommended for poultry producers. It was chosen because it represents a general average of feeding practice over wide areas and many years and so serves as a basis for comparing poultry feed costs during various periods.

THE Chicago feed-egg ratio is based on the following weekly average market quotations:

Eggs—Fresh Graded Firsts at Chicago.
 Corn—No. 3 at Chicago.
 Wheat—No. 3 Red at Chicago.
 Oats—No. 3 White at Chicago.
 Barley—No. 2 at Minneapolis.
 Bran—At Chicago.
 Tankage—At Chicago.

The farm feed-egg ratio is based on the following prices for the United States as estimated for the 15th of each month:

Eggs—Prices received by farmers.
 Corn, wheat, oats, and barley—
 Prices received by farmers.
 Bran and tankage—Prices paid by farmers.

After feed and egg prices have been obtained, the feed-egg ratio is com-

puted by dividing feed prices by egg prices as illustrated below:

Chicago feed-egg ratio, week ended March 2, 1940:

Cost of poultry ration per cwt.....	\$1.257
Price of Fresh Graded Firsts per dozen.....	.18
Chicago feed-egg ratio....	6.98

The principal advantages of the Chicago ratio, as compared with the farm ratio, are that the ratio can be computed for a more recent period and that sometimes changes are evident in weekly data which are hidden in monthly averages. An advantage of the farm ratio is that it gives a better indication of conditions throughout the United States.

THE egg-feed ratio is simply the inverse of the feed-egg ratio, i. e., it is computed by dividing egg prices by feed prices. However, the cost of feed is usually expressed in pounds rather than hundredweights. The computation is illustrated thus:

Chicago egg-feed ratio, week ended March 2, 1940:

Price of Fresh Graded Firsts per dozen.....	\$0.18
Cost of poultry ration per pound.....	.01257
Chicago egg-feed ratio....	14.3

The two types of ratios may be exemplified as follows:

For the week ended March 4, 1939, the Chicago feed-egg ratio was 6.38, indicating that it required 6.38 dozen eggs to purchase 100 pounds of poultry ration at Chicago prices. For the corresponding week in 1940, the feed-egg ratio was 6.98. The increase in the ratio indicated a less favorable situation for poultrymen than at the same time last year.

The egg-feed ratio for the week ended March 4, 1939, was 15.7, indicating that a dozen eggs would buy 15.7 pounds of poultry ration. For the corresponding week in 1940, the egg-feed ratio was 14.3. The

decrease in this ratio gives the same indication of a less favorable situation for poultrymen than at the same time last year.

THE following excerpts from letters received by the Bureau indicate some of the principal advantages of an egg-feed ratio as contrasted with a feed-egg ratio:

1. * * * It is more desirable to have all of these ratios [the hog-corn ratio, the butter-fat-feed ratio, and the egg-feed ratio] expressed in similar form. In discussing the feed situation, one may wish to refer to all of the separate ratios and it is awkward to deal with one set upon a different basis from the others.

2. * * * It would be far easier to use a ratio that goes down when conditions are unfavorable and goes up when conditions are favorable.

3. * * * I believe that most poultrymen think of their feed requirements in terms of the number of pounds normally required in their flocks to produce one dozen eggs rather than in terms of the number of dozen eggs that 100 pounds of feed will produce.

Author's Note.—If it requires 10 pounds of feed to produce a dozen eggs in a certain flock, then whenever an egg-feed ratio, based on prices paid and received by the poultryman, falls below 10, he will be receiving even less total income than his feed costs and will have nothing left to cover his other expenses. As the egg-feed ratio rises above 10, he will have more and more income left to cover other expenses.

The following excerpts indicate some of the principal disadvantages of an egg-feed ratio as compared with a feed-egg ratio:

1. * * * Those who are paying any attention to the feed-egg ratio have adjusted their thinking to this basis and would have to learn a new set-up * * * In matters of this sort, the inertia that comes

with tradition is something that cannot be disregarded.

2. * * * Feed is an expense item and when one thinks of expenses he naturally thinks of keeping them down. As the feed-egg ratio advances, it shows that expenses are increasing and profits decreasing and that, to my way of thinking, is exactly what it should convey.

3. * * * Most commercial poultrymen think of their feed in 100-pound lots and stating the ratio on the basis of pounds may cause some confusion.

WHATEVER the particular form of the ratio, its most important use is in forecasting future poultry and egg production. For example, it has been found that, on the average, a 20 percent decrease from the preceding year in the October-March feed-egg ratio has resulted in a 5 percent increase in the number of chicks on hand per farm flock the following June 1 as compared with the preceding year. Likewise, a 20 percent decrease in the July-December feed-egg ratio, on the average, has resulted in a 1 percent increase in the number of hens and pullets of laying age in farm flocks on January 1, over what would normally result from changes in the number of chicks on hand per farm flock the preceding July 1.

Feed-egg and egg-feed ratios alone can not be used to show whether egg producers are making or losing money at any one time. Many factors other than feed costs and egg prices determine the profitableness of an individual laying flock. However, the change in feed costs in relation to egg prices from one period to another is the most important factor in affecting a change in the profitableness of egg production from one year to the next. When the feed-egg ratio is high, feed costs are high in relation to egg prices, and, other things being equal, it is less profitable to produce eggs than when the ratio is low.

RICHARD J. FOOTE.

Our Changed Foreign Trade

THE present European War is producing shifts in our foreign trade quite different from those which developed during the World War. In recent months, for example, the proportion of our total exports going to Europe fell off, whereas during the World War the proportion of our exports going to Europe increased.

As a basis for interpreting the foreign trade shifts that are likely to take place during 1940 and after, there are published herewith the long-time trends in both exports and imports from 1895 to 1939 inclusive, by continents. Total exports or imports for each year were taken as 100 percent, and the proportions exported to or imported from the several continents are shown separately. The data charted for 1939 are for the 9 months January–September.

THE outstanding feature in these long-time trends is the decline in the relative importance of Europe and the rise in the relative importance of non-European countries. The dollar values for Europe as well as for all other continents were of course much larger in 1939 than in 1895, but in the case of Europe its share in the totals has declined.

In 1895 non-European countries took about 22 percent of our total commodity exports, and Europe took the remainder or close to 78 percent. By 1914 the non-European countries took 40 percent, Europe 60. During the first 2 years of the World War, 1915 and 1916, the share going to Europe increased to about 70, the share going to non-European countries declining to about 30; but in the postwar years the European and non-European proportions were restored in line with the fairly clear trend that prevailed in the prewar years. Thus, a projection of the prewar trend in the increasing importance of non-European countries called for about 50 percent of the total going to non-

European countries by 1923 and 55 in 1929, and these proportions were actually established in those years. For the first nine months of 1939, the non-European proportion was 59 percent, and this too was fairly well in line with the long-time trend.

THE long-time shifts in the relative importance of the individual non-European countries is also significant. A good part of the decline in the relative importance of Europe has been taken up by an increase in the importance of North American countries, particularly Canada. South America has become more important but the greatest increase is represented by Asia and Oceania. To this area we exported in 1938 and 1939 approximately 20 percent of our total, compared with about 4 percent in 1895. The comparable figures for South America are 10 percent in recent years and 5 percent in 1895.

While it is true that the postwar trend in the rise of the non-European countries is in line with the trend established in the prewar years, that is no assurance that the trend after 1939 will also be in line with the past. Nevertheless, it is important to observe that the present emphasis on trade with South America favors a continuation of this trend. The North American countries as a group have not shown any marked upward tendency since 1913, when they took 25 percent of our total exports. In 1929 they took less than 27 percent and in 1939, 25 percent.

This distribution among the non-European countries suggests the question as to whether in the future, should Europe decline in importance from its 1939 position of about 40 percent to perhaps only 30 percent, the decrease will be compensated for by an increase in the relative importance of South America or Asia and Oceania. The historic momentum suggests Asia and

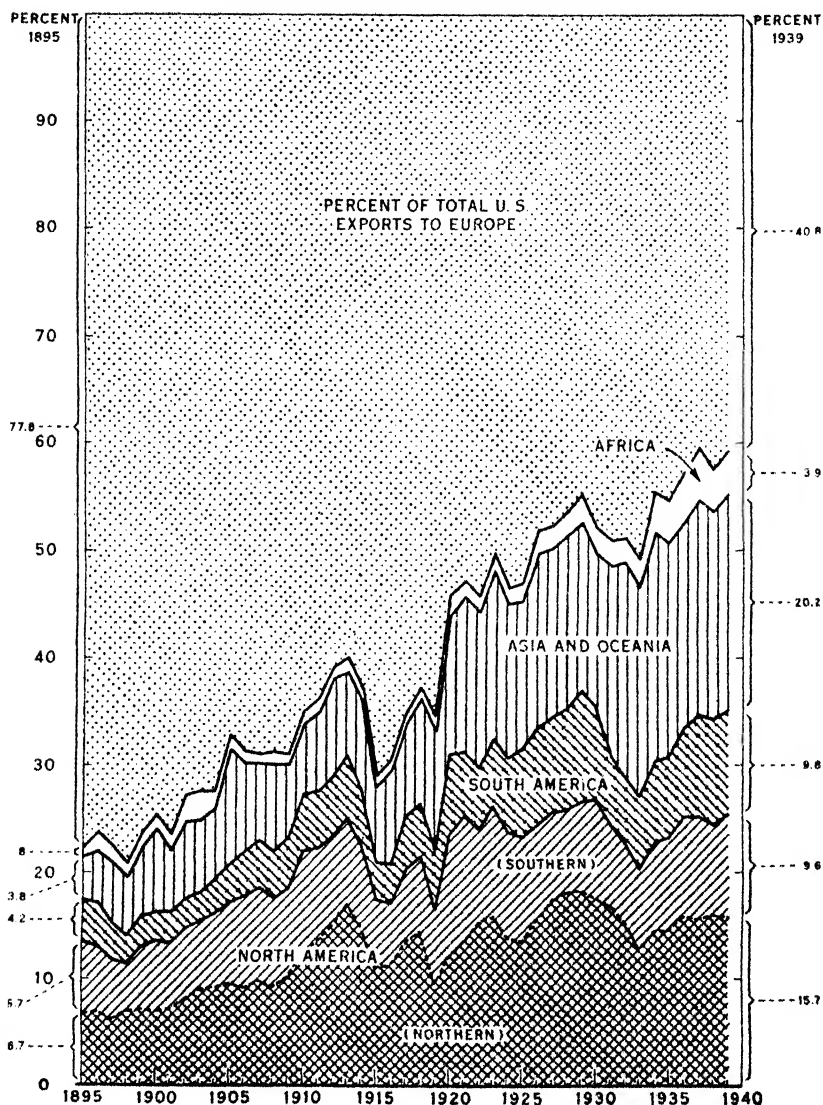
Oceania, but the current emphasis favors South America.

During this 45-year period when the relative importance of Europe declined from approximately 80 percent to 40, it may be observed that the proportion of agricultural exports in total exports also declined from about 75-80

percent to 25.¹ This leads to the additional observation that the shift of our trade to non-European countries is in the direction of countries requiring more of our industrial products and less of our agricultural.

¹ See Agriculture's Share in Total Exports, The Agricultural Situation, June 1938.

PERCENTAGE DISTRIBUTION U. S. EXPORTS BY CONTINENTS, 1895-1939

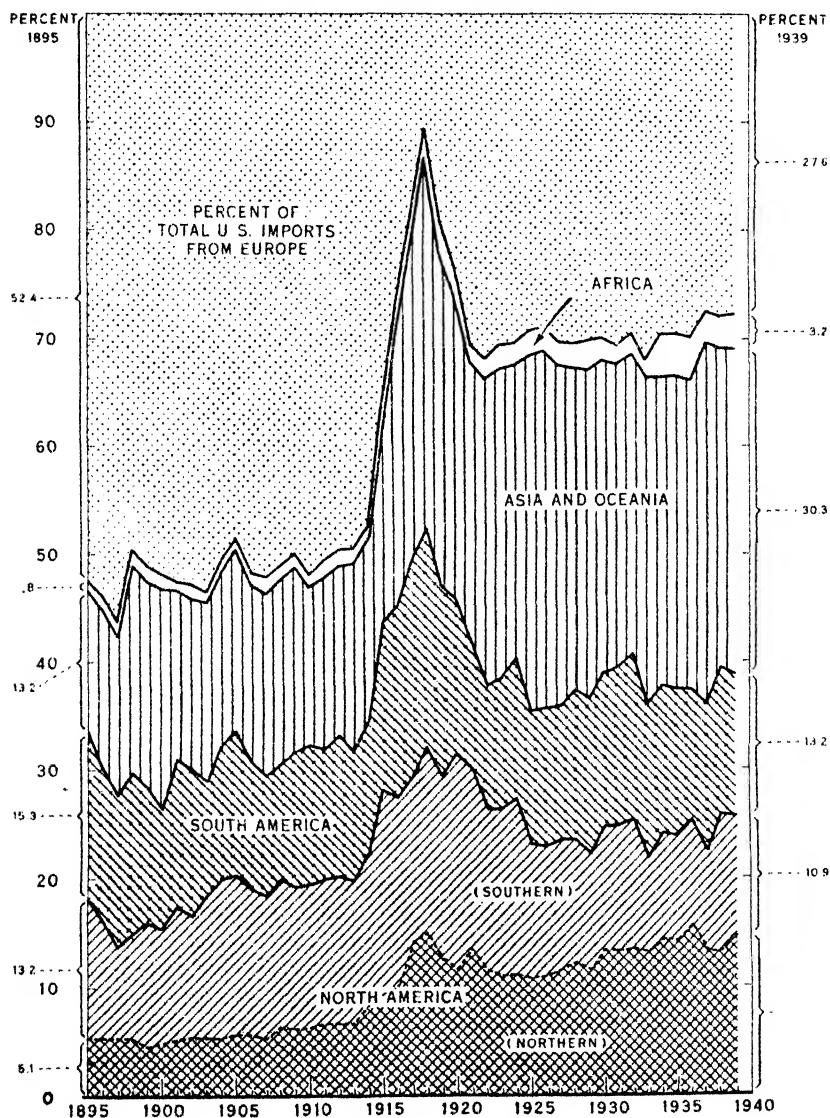


IN the case of imports, as in the case of exports, the relative importance of Europe is smaller than it used to be. In 1895, Europe supplied 52 percent of all of our imports; in 1939, 28 percent. Unlike the gradual and fairly continuous decline in the relative importance of Europe as a market for our goods, the shift in the importance of Europe as a source of our imports occurred fairly abruptly. In 1913, Europe still

supplied close to 50 percent of all United States imports, but the World War reduced this to about 10 percent in 1918. After the war, from 1921 to 1936, it settled to about 30 percent, and during the past 3 years to about 28 percent.

The continents that have taken up this relative decline in United States imports from Europe are northern North America (Canada) and Asia

PERCENTAGE DISTRIBUTION U. S. IMPORTS
BY CONTINENTS, 1895-1939



and Oceania. In the case of exports, the reduction in United States exports to Europe was offset by increased exports to Asia and Oceania and to a smaller degree, South America. Before the war, Asia and Oceania supplied about 15 percent of all United States imports. During the past 15 years these countries have supplied about 29 percent, a net shift of 14. Northern North America used to supply about 7 percent before the World War. In the last 10 years it has supplied about 14 percent, a net shift of 7 percent. These two areas alone account for practically all of the 21 percent decline in the relative importance of Europe from 49 percent in 1913 to 28 percent in 1939.

South America supplied us with 12 to 13 percent of our imports before the World War. In the past 5 years it has supplied about 13 percent, with a slightly declining tendency since 1932.

RECOGNIZING that continuation of the European War may alter this distribution of exports and imports by continents, it is nevertheless significant to observe what a projection of these tendencies might be like by 1945. South America took close to 10 percent of our exports during the last 3 years, and while this is no more than the proportion taken in 1928 and 1929, it might amount to about 11 percent by 1945 on the basis of a slight longtime upward trend. Exports to Asia and Oceania, however, which amounted to 17 percent in the last 3 years compared with about 12 percent in 1928 and 1929, might increase to about 22 percent by 1945.

ONE or two percent more of our total trade going to South America is probably all that is to be expected from the sort of indirect trade promotion of the past. During the last 50 years there have been only about three periods when the relative share of our

total export trade going to South America expanded more than usual. In the 5-year period from 1905 to 1910 that share increased by 2 percent of the total; in each of the periods from 1924 to 1929, and 1932 to 1937, 3.5 percent. Even if during the next 5 years our trade with South America should rise by say, 30 percent above that of 1939, and total United States exports remained unchanged, this would mean increasing the South American share in the total trade from 10 percent in 1939 to 13 percent and would be in line with the best experience of the past. And even if this unusual rate of shift were to transpire over a 5-year period (total exports remaining unchanged), it would mean an increase of only about 100 million dollars in export trade with South America at the end of a 5-year period and an average annual increase over the present of perhaps about 25 million dollars—a small item in contrast with our unemployment problem. This conclusion would not be materially altered even if we made the additional assumption of an increase in total United States exports to a figure somewhere between that of 1937 and 1929.

These very moderate prospects suggested by the long-time record call for positive measures that would make them more significant. These steps are broadly suggested by what might be called the A-B-C formula for our trade relations with South America: A—standing for such aid as we can consistently give for agricultural development and rural rehabilitation; B—standing for such business and industrial help as we can render financially and technically; and C—standing for greatly stimulated cultural relations that will produce so-called invisible items in our balance of trade, such as tourist travel, which would help reduce the necessity of our taking agricultural goods in payment for our exports of industrial goods.

L. H. BEAN.

Six Years of Marketing Agreements

III: *Dairy Products*

MARKETING agreement programs have become increasingly important to the dairy industry in the 6 years they have been available under Federal legislation. At the beginning of 1940 there were 28 of these programs in effect to improve marketing conditions and returns for dairy farmers. Of this total, 26 applied to fluid milk markets, 1 was for the national evaporated milk industry, and 1 for the national dry skim milk industry. The programs were in effect through marketing agreements with and without orders, through orders alone, and through licenses which had been issued before enactment of the Agricultural Marketing Agreement Act of 1937.

Approximately 1,200,000 dairymen, including more than 125,000 fluid milk producers, are directly affected by the marketing agreement programs operating in the dairy industry. The estimated 1939 farm value of fluid milk alone under these programs exceeded \$195,000,000.

THE programs for fluid milk markets command more public attention, largely because they regulate the handling of milk supplies by establishing minimum prices which handlers, or distributors, are required to pay producers. In general, each program provides for an agency to administer its terms, defines the marketing area to which the regulation applies, establishes minimum producer prices according to the classified uses made of the milk received by handlers, and provides for a method under which handlers are required to pay producers for their milk.

Classifying milk according to use by handlers with minimum producer prices for each use-classification enables dairy farmers to realize the full value which their milk has in the market. The number of classes of

milk varies with each market and is determined in part by the organization of the market, by the sanitary regulations affecting the sale of milk and its products, and by the volume of milk produced for the market relative to that used for fluid purposes. For example, the order in the Boston marketing area establishes only two classes of milk, whereas that for the New York metropolitan marketing area provides for as many as nine classes.

THE principal problem in connection with the development and administration of marketing agreement programs for fluid milk is in ascertaining and maintaining sound price relationships which encourage sales and yet assure adequate supplies of milk without stimulating surplus production. This is a problem which is complicated by seasonal periods of light and heavy production. Experience has demonstrated that when sound price relationships are not maintained in a market, forces are set in motion which eventually may break down the market's program.

The structure of prices incorporated in a milk marketing agreement program represents an interpretation of the testimony and evidence presented by producers, handlers, and consumers at the public hearing. It has become evident that those programs developed through the full and intelligent cooperation of producers, handlers, and consumers are the ones most likely to meet conditions in individual fluid milk markets and best serve the public interest. The ultimate goal of regulation under milk marketing agreement programs is market stability achieved through the establishment of reasonable producer prices sufficient to enable dairymen, over a long period of time, to produce an adequate supply of the

quality milk required by the market without encouraging uneconomic shifts in production and in sources of supply.

IN order that the full benefit of the minimum class prices required to be paid by handlers is reflected to producers, each marketing agreement program provides for one of two methods for distributing returns to the farmers who supplied the milk. This is done either through a market-wide pooling arrangement or through individual-handler pools. Under a market-wide pool, the producer price is uniform since it represents a "blend" of the combined class values of all the milk received in the market by all handlers. When individual-handler pools are used, prices received by producers delivering milk to any one handler are uniform, but they may be different from those received by producers delivering milk to other handlers, depending upon differences in the utilization of milk by the various handlers. Of the fluid milk marketing agreement programs in effect 20 provide for payments to producers through market-wide pooling arrangements, and 6 for payments through individual-handler pools.

A new feature being incorporated into fluid milk marketing agreement programs is a provision for a special producer price for milk disposed of under any program approved by the Secretary of Agriculture for the sale or disposition of milk to low-income consumers, including persons on relief. This provision is included in programs for markets where, through the cooperation of municipal authorities, producers, and handlers, there is an opportunity for putting into effect a program which will enable needy families to get more milk at less than the prevailing prices.

Provisions for low-cost milk programs are included in half of the fluid milk marketing agreement programs. Low-cost milk plans are operating in the Boston and Chicago markets. The program in Boston makes avail-

able to eligible needy families approximately 65,000 quarts of milk daily at 5 and 7 cents per quart. Through the program in Chicago, the city's relief administration is able to furnish approximately 100,000 quarts a day to needy families at a cost of 4 and 5 cents per quart. Handlers who supply the milk are paid a Federal indemnity which is in addition to the amount paid for the milk by the needy. The indemnity, plus the price received from sales, reimburses the handler for the cost of the milk and the cost of

Estimated Number of Producers, Estimated Annual Volume, and Value of Milk in Markets under Marketing Agreement Programs, 1939

Market	Estimated number of producers	Estimated annual volume	Estimated total value
		1,000 pounds	1,000 dollars
Battle Creek ¹	280	22,953	418
Boston ²	15,494	1,110,201	21,050
Chicago ³	16,000	1,626,680	29,576
Cincinnati ⁴	4,671	217,519	4,335
Denver ⁵	1,794	147,147	2,107
Dubuque ⁶	267	22,027	331
Fall River ⁷	351	34,719	1,062
Fort Wayne ⁸	912	44,645	771
Kalamazoo ⁹	400	33,666	602
Kansas City, Mo. ¹⁰	1,459	128,547	2,449
La Porte County ¹¹	290	16,239	316
Leavenworth ¹²	89	9,540	152
Louisville ¹³	1,489	136,575	2,483
Lowell-Lawrence ¹⁴	792	54,465	1,699
New Bedford ¹⁵	330	38,136	1,203
New Orleans ¹⁶	2,276	105,224	2,594
New York ¹⁷	60,176	5,008,380	102,384
Omaha ¹⁸	2,382	100,658	1,738
Quad Cities ¹⁹	1,194	76,863	1,189
San Diego ²⁰	142	90,180	1,956
Sloux City ²¹	1,117	44,576	664
St. Louis ²²	4,600	333,019	6,030
Toledo ²³	2,462	133,022	2,400
Topeka ²⁴	223	23,000	358
Twin Cities ²⁵	6,737	463,856	6,855
Wichita ²⁶	419	44,873	754
Total.....	10 125,436	10,066,715	195,476

¹ License in effect.

² Marketing agreement and order in effect.

³ Order in effect.

⁴ Reported in butterfat and converted to milk equivalent.

⁵ Volume and value of milk pooled.

⁶ Number of producers estimated by Massachusetts Milk Control Board in 1937.

⁷ Agreement and order during January 1939; order beginning July 1, 1939.

⁸ License to Apr. 4, 1939; order beginning Apr. 5, 1939.

⁹ Marketing agreement in effect.

¹⁰ In addition, approximately 118,000 producers are affected by the marketing agreement program for the evaporated milk industry, and approximately 1,000,000 producers by the program for the dry skim milk industry.

bottling, pasteurizing, and delivering the milk to the distributing depots or other points. So far handlers have supplied bottling and other services for an average of under 2 cents per quart.

The special producer price for milk used in the low-cost program is lower than that established for regular fluid milk requirements of the market and higher than the price established for so-called "surplus" milk. Where the low-cost milk programs operate, they bring into use with higher returns to dairy farmers substantial quantities of milk which the producers had been selling for cream and manufacturing purposes at lower prices. At the same time, needy families are able to increase their consumption of milk and handlers have a larger volume of milk running through their plants.

BASICALLY, the type of program authorized for milk by the Marketing Agreement Act is, in many ways, similar to that carried on by cooperatives. In this respect, the marketing agreement programs provide the framework which enables producers to carry out their collective bargaining and cooperative programs more effectively. The Act itself contains provisions definitely designed to encourage these producer organizations.

Several of the prerogatives extended to cooperatives were involved in the New York ¹ and Boston ² milk order cases which were reviewed by the Supreme Court. In its decisions of June 5, 1939, the Court upheld the constitutionality of the Act and the validity of the two orders. Besides establishing the legality of Federal milk market regulation, including milk price fixing, these decisions clarified several questions which had been raised concerning prerogatives extended to cooperatives. Among these were the right of cooperative

associations to vote for their members in producer referenda on the issuance of orders, the right of a cooperative to campaign during a producer referendum, and the right of a cooperative to pool all of its returns for payment to producers.

These two decisions are of far-reaching significance to the dairy industry and to the agricultural cooperative movement in general. They give greater permanency to an approach to marketing problems which farmers have sought through both the Federal and State Governments.

IN the last half-dozen years many of the States have authorized programs similar to the Federal marketing agreement programs. Nearly half the States have milk-control laws. The Marketing Agreement Act authorizes Federal-State cooperation in the development and administration of the regulatory programs. A number of States have indicated their interest in the issuance of Federal orders complementary to, or concurrent with, their own. Memoranda of cooperation in the development of programs and issuance of orders for milk have been signed by the Secretary and the authorities of five of these States. Programs in effect through joint or complementary orders include the milk markets of Fort Wayne and La Porte, Ind.; Lowell-Lawrence, Mass.; New Orleans, La.; and New York, N. Y.

There is growing evidence of closer coordination between the activities of the States and the Federal Government in dealing with producer marketing problems along the lines authorized by the Marketing Agreement Act. The Supreme Court's recent decisions on the Federal and State regulatory activities in milk markets make available, for the first time, fundamental legal guides for this type of Federal-State cooperation.

¹ *United States v. Rock Royal Cooperative, Inc., et al.*, 307 U. S. 533.

² *H. P. Hood & Sons, Inc. et al. v. United States*, 307 U. S. 588.

NATHAN KOENIG,
*Division of Marketing and
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Economic Trends Affecting Agriculture

Year and month	Industrial production (1923- 25=100) ¹	Income of industrial workers (1924- 29=100) ²	Cost of living (1924- 29=100) ³	(1910-14=100)				Farm wages	Taxes ⁴
				Wholesale prices of all commod- ities ⁵	Prices paid by farmers for commodities used in— ⁶				
					Living	Pro- duction	Living and production		
1925	104	98	101	151	164	147	157	176	270
1926	108	102	102	146	162	146	155	179	271
1927	106	100	100	139	159	145	153	179	277
1928	111	100	99	141	160	148	155	179	279
1929	119	107	99	139	158	147	153	180	281
1930	96	88	96	126	148	140	145	167	277
1931	81	67	88	107	126	122	124	130	253
1932	64	46	79	95	108	107	107	96	219
1933	76	48	76	96	109	108	109	85	187
1934	79	61	78	109	122	125	123	95	178
1935	90	69	80	117	124	126	125	103	180
1936	105	80	81	118	122	126	124	111	182
1937	110	94	84	126	128	135	130	126	187
1938	86	73	82	115	122	124	122	124	186
1939 ⁷	105	83	82	113	120	122	121	124	—
1939—February	99	79	82	112	—	—	120	—	—
March	98	79	82	112	119	122	120	—	—
April	92	75	82	111	—	—	120	121	—
May	92	75	81	111	—	—	120	—	—
June	98	80	81	110	119	121	120	—	—
July	101	80	81	110	—	—	120	126	—
August	103	83	81	109	—	—	119	—	—
September	111	86	82	115	122	123	122	—	—
October	121	91	82	116	—	—	122	126	—
November	124	93	82	116	—	—	122	—	—
December	128	93	82	116	121	124	122	—	—
1940—January	120	93	82	116	—	—	122	119	—
February	—	—	—	115	—	—	122	—	—

Year and month	Index of prices received by farmers (August 1909–July 1914=100)								Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	153	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1939—February	66	70	78	105	116	107	91	92	77
March	66	71	81	110	116	100	88	91	76
April	67	70	82	95	114	95	87	89	74
May	72	72	85	88	112	92	85	90	75
June	73	73	93	105	107	94	83	89	74
July	66	73	80	99	107	96	89	89	74
August	64	71	70	99	101	100	90	88	74
September	83	76	73	117	117	107	102	98	80
October	77	74	73	128	112	112	108	97	80
November	79	75	66	123	107	117	117	97	80
December	87	82	65	96	101	118	97	96	79
1940—January	90	85	96	117	103	119	91	99	81
February	91	85	76	168	101	118	98	101	83

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1925=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real-estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909–July 31, 1914.

⁷ Preliminary.

NOTE: The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

THE AGRICULTURAL • SITUATION •

APRIL 1940

A Brief Summary of Economic Conditions

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SPRING PLANTING is underway. Nine million workers—farm family workers and hired hands—are in the fields. Farmers report they intend to plant less corn and more soybeans this year, less tobacco, fewer peanuts, more spring wheat, more flaxseed, more grain sorghums. * * * In Washington, meanwhile, the agricultural economists watch the business curves for clues to the domestic demand for farm products. They see some signs of improvement this spring. Less satisfactory is the outlook for foreign demand. Little wheat and tobacco are going abroad, limited quantities of pork products, sales of cotton for export have tapered off. * * * Prices of a number of farm products—with the notable exception of hogs—hold at fairly good levels—all things considered—but continue below the purchasing power goals set by Congress. Farm cash income in the first quarter of this year was a little larger than in the corresponding period of 1939. Second quarter also may show some gain.

Commodity Reviews

DEMAND: Downswing halted?

CONDITIONS affecting the domestic demand for farm products continued to deteriorate in March, but at a considerably slower rate than in the two preceding months. The general rate of industrial activity may slacken more, but slowing of the recession in some lines of activity and in prices of several commodities sensitive to changes in underlying economic conditions suggest that the end of the downward movement is about due. However, there are as yet no signs pointing toward rapid recovery thereafter.

In contrast to the sharp contraction in industrial activity during the first quarter of 1940, consumer income apparently averaged almost as high as in the final quarter of 1939. Usually it takes several months of cumulative changes in industrial activity to appreciably affect consumer income. A portion of such income is dependent on corporate earnings of preceding months, pay rolls of persons engaged in the trade and service industries are little affected by temporary fluctuations in industry, and factory working forces are not adjusted as rapidly as output. Unless the decline in industrial activity is more prolonged than is now expected, consumer income and the domestic demand for farm products probably will not be substantially reduced.

Conditions in important industries indicate that the downward trend of industrial activity will be halted this spring. Inventories in the hands of manufacturers and distributors increased by \$1,219,000,000 during the last half of 1939, according to Dun's survey, but this increase was not accompanied by speculative price advances comparable to those preceding the 1937-38 relapse in business. Commodity prices do not appear to be in as vulnerable position as in 1937 and

there appears to be less danger of serious inventory losses, particularly since major wars have in the past been accompanied by increasing world commodity prices. The industrial inventory situation, therefore, does not appear to carry the threat of concerted efforts toward extensive reductions such as those which aggravated the decline in industrial activity during the 1937-38 depression.

P. H. BOLLINGER.

INCOME: Increase

Farmers' cash income from marketings and Government payments was larger in the first quarter of this year than in the corresponding period of 1939. Total for January and February was 1,378 million dollars compared with 1,160 million dollars in the same period of 1939. Preliminary indications are that income from farm marketings in March was larger than in March a year ago whereas Government payments were somewhat smaller.

The increase in January-February income from marketings this year over last was about equally divided as between crops and livestock products. Larger receipts were reported on grains as a group, and on tobacco; slightly smaller receipts from cotton and cottonseed, and fruits; and about the same returns from vegetables. All major branches of the livestock industries shared in the larger income this year—meat animals, dairy products, and poultry and eggs.

Month and year	Income from marketings	Income from Government payments	Total
February:			
1940....	\$537,000,000	\$98,000,000	\$635,000,000
1939....	471,000,000	85,000,000	556,000,000
1938....	483,000,000	31,000,000	514,000,000
January:			
February:			
1940....	1,164,000,000	224,000,000	1,378,000,000
1939....	1,064,000,000	96,000,000	1,160,000,000
1938....	1,126,000,000	48,000,000	1,174,000,000

PRICES: Decline

Prices of farm products—on average—declined during the month ended March 15, having lost more than the 2-point gain of the preceding month. Substantial losses on eggs and truck crops more than offset gains for cattle, wheat, and lambs. Prices of hogs were slightly lower. The March 15 Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power per unit of farm products ¹
1939			
January.....	94	120	78
February.....	92	120	77
March.....	91	120	76
April.....	89	120	74
May.....	90	120	75
June.....	89	120	74
July.....	89	120	74
August.....	88	119	74
September.....	98	122	80
October.....	97	122	80
November.....	97	122	80
December.....	96	122	79
1940			
January.....	99	122	81
February.....	101	122	83
March.....	97	122	80

¹ Ratio of prices received to prices paid.

index of prices of all farm products combined was 97, compared with 101 a month earlier and with 91 a year earlier.

Prices paid by farmers continue at 122 percent of the 1910-14 average, the same as a month earlier. This compares with 120 percent in March last year. The buying power of farm products in March was 80 percent of the 1910-14 average, compared with 83 in February, and with 76 in March last year. * * * Declines in prices of some groups of farm products during the past month were largely seasonal, in others they represented adjustments from the earlier abnormal advances due to unusual winter weather conditions.

PLANTINGS: Shifts

Farmers the country over have reported they intend to plant about the same aggregate acreage of crops this year as last, but expect to make some important shifts as between crops. Principal changes include (1) a shift from corn to soybeans, hay and pasture in the central and eastern Corn Belt; (2) increased, and probably near-record plantings of sorghums in

Prices of Farm Products

Estimates of average prices received by producers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	March average, 1910-14	March 1939	February 1940	March 1940	Parity price, March 1940
Cotton, lb.....	cents.. 12.4	12.4	8.31	10.0	10.0	15.87
Corn, bu.....	do.. 64.2	61.3	44.4	54.7	56.0	82.2
Wheat, bu.....	do.. 88.4	88.0	56.7	84.1	85.0	113.2
Hay, ton.....	dollars.. 11.87	12.06	6.67	8.10	8.22	15.19
Potatoes, bu.....	cents.. 69.7	67.5	64.6	75.2	77.0	86.5
Oats, bu.....	do.. 39.9	40.3	26.9	37.7	38.6	51.1
Soybeans, bu.....	dollars.. (1)	(1)	.73	.96	1.01	---
Peanuts, lb.....	cents.. 4.8	4.8	3.4	3.6	3.6	6.1
Beef cattle, cwt.....	dollars.. 5.21	5.29	7.00	6.84	7.00	6.67
Hogs, cwt.....	do.. 7.22	7.41	7.10	4.97	4.87	9.24
Chickens, lb.....	cents.. 11.4	11.4	14.3	12.2	12.8	14.6
Eggs, doz.....	do.. 21.5	19.6	16.0	20.2	15.4	21.8
Butterfat, lb.....	do.. 26.3	27.1	22.7	29.7	28.4	35.0
Wool, lb.....	do.. 18.3	18.7	20.0	27.8	27.3	23.4
Veal calves, cwt.....	dollars.. 6.75	6.92	8.69	8.80	8.81	8.64
Lambs, cwt.....	do.. 5.87	6.22	7.43	7.61	8.05	7.51
Horses, each.....	do.. 136.60	138.40	83.00	78.20	78.20	174.80

¹ Prices not available.

² Adjusted for seasonality.

the Southern Plains Area where drought last fall prevented normal plantings and growth of winter wheat; (3) increased, but not unusually heavy plantings of spring wheat and flaxseed in the northwest.

Contemplated changes in plantings of other crops, affecting smaller acreages but of importance to the growers concerned, include increases of 11 percent in the acreage of beans; 2 percent in rice and potatoes; 1 percent in oats. Decreases planned include 5 percent reductions in peanuts and cowpeas; 2 percent in sweetpotatoes; 21 percent in tobacco. The Crop Reporting Board explains that these indications of acreage shifts have been adjusted to allow for the usual differences in each State between March plans and final plantings. No report is available on cotton.

United States: Planted Acreages 1929-38 and 1939, and Prospective Plantings for 1940

Crop	Average 1929-38	1939	Indi- cated 1940	1940 as per- cent of 1939
	Thou- sand acres	Thou- sand acres	Thou- sand acres	
Corn, all.....	101,758	91,501	87,770	95.9
All spring wheat...	22,344	17,532	19,425	110.8
Durum.....	3,671	3,220	3,539	109.9
Other spring...	18,674	14,312	15,886	111.0
Oats.....	39,501	35,512	35,818	100.9
Barley.....	12,655	14,546	14,606	100.4
Flaxseed.....	2,500	2,470	2,836	114.8
Rice.....	925	1,039	1,057	101.7
Grain sorghums, all.....	8,380	9,366	10,309	110.1
Potatoes.....	3,363	3,069	3,130	102.0
Sweetpotatoes and yams.....	860	862	845	98.0
Tobacco.....	1,674	1,942	1,524	78.5
Beans, dry edible...	1,949	1,744	1,935	111.0
Soybeans ¹	4,756	9,023	10,610	117.6
Cowpeas ¹	2,476	2,923	2,767	94.7
Peanuts ¹	1,672	2,410	2,296	95.3
Timothy ²	55,808	63,347	59,385	101.8

¹ Grown alone for all purposes. Partly duplicated in hay acreage.

² Acreage for harvest.

EMPLOYMENT: Increase

Farm employment is increasing seasonally. The number of hired hands totaled 1,843,000 persons as of March 1, compared with 1,578,000 on

January 1. Approximately 50,000 fewer hired workers were employed this March 1 compared with last, reflecting the late opening of spring this season. This lag may be picked up in coming months.

Farm employment usually increases through May and June and reaches a peak in early July. The number of hired hands on July 1 last totaled 3,091,000 persons. Employment then declines, but builds up to another peak in early October. The number of hired hands on October 1 last totaled 3,022,000 persons. There is a sharp decrease through November and December. The low point for the year is on January 1.

Increases and decreases in numbers of farm family workers follow a similar pattern. On March 1 the number of family workers totaled 7,230,000 persons, compared with 7,063,000 on January 1, and with 7,377,000 on March 1 last year. The peak for 1939 was 9,443,000 family workers on June 1.

WHEAT: Smaller Supply

A domestic supply of wheat totaling approximately 900 million bushels is indicated for 1940-41. This figure is based on a winter wheat crop indicated as of December 1 last of about 399 million bushels, plus a spring wheat crop tentatively placed at 200 million bushels, plus a carry-over of about 300 million bushels on July 1 next. The total compares with 1,009 million bushels supply in 1939-40, consisting of a crop of 755 million bushels plus a carry-over of 254 million bushels on July 1 last.

Domestic disappearance has been tentatively forecast at about 660 million bushels during the coming season. Shipments to United States possessions may total 3 million bushels. The quantity available for export to foreign countries in 1940-41 and for carry-over on July 1, 1941 would be about 237 million bushels. It is expected that exports in 1940-41 will be small. Under the provisions of the

Agricultural Adjustment Act of 1938 the carry-over goal is 30 percent of a normal year's consumption and exports, or approximately 225 million bushels.

The world carry-over of wheat on July 1 next has been projected at approximately 1.4 billion bushels. This compares with 1.2 billion bushels on July 1 last, and with 900 million bushels average in the 10 years 1929-38. Of the total world carry-over on July 1 next about 300 million bushels will be in the United States, and the remainder—approximately 1.1 billion bushels—as follows: 700 million bushels in Canada, Argentina, and Australia combined; 400 million bushels in European countries.

Wheat prices in the United States are expected to continue to average relatively high compared with prices in other surplus-producing countries, so long as the Government loan and export programs continue, and domestic production is not large. Changes in domestic prices the next few months will depend largely upon weather conditions here and abroad, developments in the foreign political situation, and upon the volume of overseas sales of North American wheat.

COTTON: Supply Reduced

The United States cotton supply situation has improved this season due to increased domestic mill consumption and the larger volume of exports. The rate of domestic consumption and exports so far this season and the outlook for the period April through July indicate a decrease of 2 million or more bales in the United States carry-over of cotton on August 1 next, compared with August 1, 1939.

At this rate the domestic carry-over of American cotton on August 1 next would total less than 11 million bales. Nevertheless, this would be the third largest carry-over on record. It is based upon prospects that domestic consumption and exports this season will exceed 13.5 million running bales.

This figure consists of domestic consumption of more than 7.5 million bales, and exports of about 6 million.

Data on foreign consumption of American cotton are not available, but it is known that consumption has been running unusually low in relation to exports of American cotton. Foreign stocks of American cotton on August 1 next are expected to be about 1 million bales larger than a year earlier.

FEED: Smaller Supply

BAE forecasts that supplies of feed grains will be a little smaller this year than last, provided the growing season is about average and feed grain acreages are about as indicated on March 1. Prospective plantings indicated a reduction of 4 million acres in the corn acreage, slightly larger acreages of oats and barley, and an increase of 1 million acres in grain sorghums. The supply of feed grains per grain-consuming animal unit in 1940-41—on the basis of production assumptions and supplies in the carry-over from last year—will be slightly smaller than in each of the past 3 years, but materially above the average for the period 1928-32.

HOGS: Prices Down

This month is a critical period for hog producers. Hog marketings are increasing seasonally and in unusually large volume. This reflects the large pig crop produced last fall and the unfavorable ratio of hog prices to corn prices in recent months. Slaughter supplies of hogs are expected to continue materially larger than a year earlier during the remainder of the current hog-marketing year—through next September.

Prices of hogs have weakened in the last 3 months, and now average much below prices in the like period of 1939. The question is how much of the current impact of heavy marketings will be offset by a stronger consumer demand this spring and summer than last. The export market promises little: BAE says that the export de-

mand for pork and lard "probably will be no stronger and may be weaker" during this period.

Evidence accumulates meanwhile that the pig crop will be smaller this spring than last. The number and proportion of sows in receipts at leading markets were larger this winter than last. This means that a larger-than-usual proportion of sows bred for spring farrow have been marketed. The 1940 fall pig crop also is likely to be somewhat smaller than the 1939 crop in view of the continuance of unfavorable hog-feed price ratios.

CATTLE: Marketings

BAE looks for increased marketings of grain-fed cattle this year over last to be offset largely by a continued decrease in marketings of breeding stock. Total slaughter supplies will be about the same this year as last, when dressed weight of cattle slaughtered under Federal inspection aggregated 4.8 billion pounds. This was about the same as in 1938, and only little more than in 1937.

The increase in marketings of grain-fed cattle will be most pronounced during the first half of the year, it is stated. It is probable, though, that the increase in marketings of short-fed cattle will be greater than the increase in marketings of long-fed, well-finished cattle during this period.

Cattle numbers are expected to continue upward during the next few years, barring the recurrence of severe droughts. Last year, much of the increase in the total cattle population was in beef cows and heifers. This indicates a larger calf crop this year; eventually, a considerable increase in slaughter supplies of cattle and calves is in prospect.

The most pronounced increase in cattle numbers during the past year was in the North Central States. Total was 31.8 million head in this area as of January 1 last, or about 6 percent more than on January 1, 1939. The largest increase in any one State was in Kansas where cattle numbers on

January 1, 1940 totaled 13 percent more than a year earlier.

LAMBS: Spring Supply

Spring lambs will soon be coming to market in large volume—much larger than in the corresponding months (May and June) last year. The early spring lamb crop in the principal producing States is about the same this year as last, but many more of the early lambs in California and Texas are expected to reach slaughter weight and condition by July 1.

Early lamb prospects are favorable in several of the other western sheep States, but in the early lambing regions of the eastern States the feed and weather conditions have been unfavorable since the first of the year. * * * Marketwise, the prospects are for a stronger consumer demand for lamb and other meats this spring and summer than last.

The situation in producing areas: **California:** Early lamb crop probably not quite so large as the record crop of last year, but condition above average on March 1, and normal development expected in April and May. **Arizona:** Early lambing season about the most favorable ever known. **Texas:** Early lamb crop larger this year than last. **Idaho, Washington, Oregon:** Early lambs have made good progress.

WOOL: Favorable

BAE says that domestic supply conditions continue relatively favorable for the marketing of the 1940 domestic wool clip. Even though imports in February and March may have been relatively large, it is stated, the carry-over in the United States into the new season which begins this month is probably the smallest in recent years. No weakening of the domestic situation is expected through developments in foreign wool markets in the next few months.

Prices have advanced sharply in South America and South Africa since early January, and supplies of good quality wools have been reported as

clearing rapidly. Only small quantities of Australian wool have been released to neutral countries, at prices fixed by the British Government Wool Control. Prices in the United States are considerably higher than at this time last year.

Domestic mill consumption of wool may be smaller this year than last, when consumption of apparel wool exceeded domestic production of shorn and pulled wool by about 190 million pounds. There is little prospect, however, of a large carry-over of wool at the end of the 1940 season, unless imports should be relatively large.

POTATOES: Plantings

Potato growers reported as of March 1 they expect to plant 3,129,900 acres this year. This compares with 3,068,800 acres planted in 1939, and with 3,363,000 acres average in the 10 years 1929-38. Average abandonment would leave about 3,083,000 acres for harvest this year, or about 6 percent less than the average of 3,296,000 acres harvested in 1929-39.

Prospective plantings in the 11 early States were indicated at 423,000 acres, compared with 419,000 acres planted in 1939; in the 7 intermediate States, 287,000 acres compared with 291,000 acres in 1939; in the 30 late States, 2,419,900 acres compared with 2,358,800 acres in 1939. The 30 late States usually have about three-fourths of the total United States potato acreage.

Prices of new stock potatoes have declined from the high figures following the winter freeze; nevertheless, prices were higher this March than last. Supplies of new potatoes are expected to continue relatively small through April. Shipments from north Florida and the lower Rio Grande Valley of Texas are 2 to 3 weeks later than usual.

TRUCK CROPS: Prices High

Market prices of many truck crops declined in March from the relatively high levels of a month earlier, but prices of those severely damaged by

the late January freeze continued high. Supplies of lima beans, snap beans, beets, cucumbers, eggplant, okra, peppers, squash, and tomatoes are small. Plantings of truck crops for spring and early summer harvest in all the southern States and in California were delayed. Heavy marketings of truck crops are forecast for May and June, since the delayed early crops are likely to overlap the marketing season of some of the second early States.

FRUITS: Supply Down

BAE reports that the supply of oranges for marketing during the next 2 or 3 months is approximately one-third less than in the corresponding period of 1939. But that supplies for the summer months beginning about June—largely from the California Valencia crop—will be about as large as they were last summer. Grapefruit are in sharply smaller supply for the remainder of the current season as compared with a year earlier; the supply of lemons is about the same this season as last.

Cold-storage holdings of apples—totaling 14.4 million bushels—were slightly smaller this March 1 than last, reflecting increased domestic consumption during the past winter due to the distribution of apples to persons on relief, better consumer demand this winter than last, and the smaller available supplies of citrus fruits. Prices of western apples in auction markets were slightly higher this March than last.

Prospects for early strawberries improved in March. Marketings from Florida were small, but were expected to increase in late March and to attain volume in April * * * AMS reported reduced prospects for peaches in Ohio, Indiana, Illinois, Missouri, southwestern Michigan, and the extreme northwest portion of Arkansas, but said that trees in these States were not seriously injured by the winter freeze. No appreciable losses were reported in other areas.

DAIRY: Increase

Milk production—increased sharply in recent weeks—is expected to continue at record or near record levels in view of the increased number of cows and fairly ample supplies of feed. Production of dairy products is expected to increase this spring and summer, but price-supporting factors are the better consumer demand than at this time a year ago, and the smaller volume of supplies in cold storage.

AMS forecasts that the production of milk for each person in the population this year will average about as high as in any recent year—about 849 pounds. Factors include the higher prices of dairy products now than a year ago in comparison with prices of hogs, cattle, lambs, and poultry. Milk cows probably will continue to be well fed, it is stated, even though feed grain supplies on farms are not quite so large in comparison with livestock numbers as they were a year ago, and prices of feed grains are higher.

An increase of nearly 2 percent in the number of milk cows on farms is forecast for this year, since the number of heifers to be added to the milking herds is larger than in 1939, and marketings of cows have recently been low. AMS adds that the moderate supply of dairy products in storage and the somewhat increased sales of fluid milk and cream are also helping to hold milk production above last year's output.

EGGS: More of Them

Production of eggs has increased sharply since midwinter, prices have declined, and the feed-egg price ratio once more is unfavorable to producers. Little change is expected in this unfavorable price situation this spring, since the price of feed may not vary much in coming months, and more than the average number of eggs will be required to purchase 100 pounds of laying ration.

Farmers the country over were aver-

aging 15.4 cents a dozen eggs in mid-March compared with 16.0 cents at the same time last year. During the week ended March 23 it required 7.51 dozen eggs to buy 100 pounds of standard poultry ration at Chicago. This compares with 6.28 dozen a year earlier.

The number of layers in farm flocks is declining seasonally, but probably less rapidly than at this time last year. Flocks had been culled rather heavily in January and February, and market receipts of dressed poultry have been unusually large. Lower farm prices of chickens this spring than last reflect the larger market supplies of fresh and frozen poultry.

TURKEYS: Increase

Turkey growers the country over have reported intentions to raise approximately 34.5 million birds this year. This compares with about 33.0 million in 1939 and with 21.8 million average in the preceding 10 years. Production increases have been indicated in all regions of the country except the South Atlantic and Western States.

Fewer poultts will be bought from commercial hatcheries this season, but this will be more than offset by home hatchings. Producers reported 7 percent more turkey hens on hand this February 1 than last. Intended increases in total numbers of turkeys to be raised range from 5 percent in the West North Central States to 11 percent in the East North Central and South Central States.

Producers were favored last season by relatively low prices of feed during the turkey growing period and by improving consumer buying power during the turkey marketing season. This year the spread between feed costs and market prices may be narrower. And, a failure to move profitably the large stocks of turkeys now in cold storage would adversely affect the storage demand for turkeys next fall.

FRANK GEORGE.

After the War—What?

TO visualize some of the problems that will face American agriculture when the current wars end, it is necessary to have some understanding of how these wars are being conducted and their effect on American agriculture during the period of hostilities. The present European war and, to some extent, the war in the Orient have been to an unexampled degree economic in character, involving blockade and counter-blockade and almost complete governmental control of the economies of the belligerents. The policy seems to be to cripple the economy of the opponent as the way to victory.

The United States is not immune to the effects of these economic weapons. The Allied naval blockade has barred our products from the markets of Central Europe. The pooling of the economic and financial resources of the Allies and the centralization of purchases through government commissions have to date caused our farm exports to be smaller than they would have been had the war not broken out.

FROM what we know of the application of government controls and the general wartime commercial policies of the belligerents, the war is not likely to bring about any substantial increase in our agricultural exports during the next year or so, at least. Should the war continue beyond that time it is possible that the Allies—if they are in control of the seas—will find it desirable to obtain a larger proportion of their agricultural supplies from the United States as the most accessible market.

From one standpoint, at least, failure of the war to bring about an immediate increase in our agricultural exports can be looked on as a blessing in disguise, because a sudden war-created increase would be abnormal and temporary and tend to cause an

over-expansion in our agricultural plant such as occurred during the World War, the correction of which we have been struggling with ever since. If we can keep our agricultural export industries in proper adjustment we will not have to make what might prove to be more difficult and more extensive adjustments in the post-war period. Indirectly, of course, those segments of our agriculture that are producing primarily for the domestic market, such as poultry, cattle and sheep raising, dairying, and vegetable production, should benefit from any increase in industrial activity and consumer purchasing power resulting from increased purchases of our industrial products by the belligerents.

AS for post-war developments there are many questions—economic and political—that cannot be answered unless one can forecast the actual duration of the war and the eventual victors. On the other hand, it is possible, without regard to these questions, to point out certain fundamental difficulties that American agriculture will have to face in the post-war period. Basically, it appears likely that both belligerents and neutrals will find it advisable or necessary to continue many of the economic controls established during the war. Such controls are not likely to prove beneficial to American agriculture.

One obvious conclusion is that the continuation of the war for any appreciable time will result in the near exhaustion of the financial resources of both victor and vanquished. The belligerents will be in need of large quantities of both agricultural and industrial products, the production of which will be neglected during the war or which will be needed in the post-war reconstruction but will be confronted with the problem of how to pay for these products. Of especial concern will be the acquisition of

important raw materials such as cotton, wool, and rubber, which are produced only in either limited quantities or not at all in Europe. In short, the end of the war will not solve one of the causes of the war itself—a more equitable distribution of control of the world's raw material resources.

THE United States is an important exporter of certain raw materials and foodstuffs, but the only way in which other countries can pay for our goods in the long run is by transferring gold to us or by selling to us the surplus products of their own industries. We have already acquired most of the world's gold supply because other countries, due to our high tariff barriers, have been unable to sell us a sufficient volume of the surplus products of their own industries to pay for the goods they would like to obtain from us. This has been an important cause of the decline in our agricultural exports, since our practice of liberal lending was discontinued in the late 1920's. If we expect these countries to resume or to expand their purchases of our agricultural products after the present war is over, we will have to consider ways and means of accepting more of their goods in payment.

Another important development of the present war is the dependence of the belligerents—particularly the Allies—on their dominions and colonies for agricultural and raw material supplies. They are also favoring trade with certain other neutrals such as Argentina and other Latin American countries, where they can pay for the needed agricultural products in goods or services, such as shipping and insurance, and thus eliminate the necessity of acquiring foreign ex-

change. This policy seems likely to lead to an expansion in the agriculture of these countries, an expansion which may not be needed after the war. In other words, except for the United States, the major agricultural exporting countries of the world may find themselves in roughly the same position after the present war as the United States was after the World War—with a surplus of agricultural production for which adequate markets cannot be found.

TO sum up, it appears that United States agricultural exports are not likely to benefit materially from the war, that after the war we will face increasing competition from other agricultural exporting countries for a number of years, and that other countries will be faced with the problem of how to pay for needed imports. Such a situation might lead to a growing recognition of the need of a more equitable distribution of the world's raw material resources or more ready access to these raw materials by those countries most in need of them. There is a possibility that international commodity agreements may help to solve this problem. While such agreements concluded in the past have been none too successful, partly because of their failure to take into consideration the interests of consumer or importing countries, it is possible that the present war may so change world opinion as to make possible a philosophy of "give and take," which is a necessary prerequisite for international cooperation.

D. F. CHRISTY,
*Office of Foreign
Agricultural Relations.*

Reduction: Tobacco growers reported as of March 1 they intend to plant 1,524,100 acres of tobacco this spring. This compares with 1,942,200 acres harvested in 1939, and with 1,673,870 acres average for the 10 years 1929-38. The reduction this year compared with last consists chiefly in a sharp curtailment in acreages of flue-cured and burley tobacco. It reflects the large stocks already in existence, restricted foreign demand, and low prices.

Farm Labor in Southeast Missouri

IN January 1939 several hundred former sharecroppers set up camp along the southeastern Missouri highways. They said they had been evicted—that they had no place to go. Their demonstration drew Nation-wide attention. It was apparent that these new recruits to the army of farm laborers could look forward to no more than a few weeks' work a year. The rest of the time would find them penniless and shelterless somewhere on the highway. These sharecroppers constituted a serious local problem. Their plight was indicative of a problem national in scope.

A BRIEF analysis of the forces behind the displacements in the four major cotton counties of the area—Dunklin, Mississippi, New Madrid, and Pemiscot—shed light on local conditions and on general trends in similar areas. Estimates revealed that the local labor which is available greatly exceeds the requirements for every month of the year except June, October, and November. To meet the requirements of January (4,940 laborers), February (5,166), March (10,002), April (13,268), and May (18,653), there were available 35,737 family and hired laborers, leaving a surplus for each of these months ranging from 17,084 to 30,797 laborers.

In June and July, the surplus is less pronounced because the total labor requirement advances to 30,667 and 27,854, respectively—although a sizable surplus is evident even during these months. During August and September, the surplus again becomes greater, but is nearly eliminated in October when cotton picking requirements increase the total for the month to 35,523 persons, leaving only 214 extra workers.

These estimates are conservative. They are based on census figures as of the first week in January 1935, which showed 29,687 family laborers and 6,050 day laborers in the area.

January is a slack season of the year and the labor supply was at a minimum when the census was taken. The number of agricultural laborers has increased since 1935. Furthermore, family labor on a farm is utilized to its utmost and performs a share of the work that is not in proportion to its size.

THE southeast Missouri area had already received considerable aid from the Farm Security Administration before this agency's special program of relief was announced several weeks ago. Last year more than 1,300 families received standard rehabilitation loans to enable them to buy farming equipment, food, and clothing. Many other families were getting cash grants during the periods of slack work and greatest hardship.

The new program was prompted to some extent by a survey made by the Missouri Employment Service last fall, which showed that a minimum of 925 families and laborers in the seven southeastern counties had no place to farm for the coming 1940 crop season. Farm Security's rehabilitation rolls already indicated, however, that the "unlocated" families were not the only ones who suffered in southeast Missouri. Hundreds of sharecropper families who had found farms for 1940 needed food, housing, clothing, and equipment. To meet the needs of the insecure population of this rich cotton region, Farm Security representatives worked with a special committee of Missourians set up by Governor Stark to formulate a program of assistance.

FIRST phase of the new program was the making of loans and grants to farm labor, tenant or sharecropper families who could obtain locations with sufficient land for a garden and pasturage for a cow. These cash advances will enable the families to grow a large portion of their own food supply and preserve food for winter

use, thus conserving their cash incomes while bettering their diets, health, and living standards. At the same time an attempt is being made, in cooperation with the land-owners, to improve the housing and sanitary facilities of the families.

The first 200 families who received this aid obtained grants that averaged approximately \$45 each, to cover the cost of garden, canning, and home supplies. To this same group, approximately 40 loans averaging \$60 have been made for the purchase of cows. It is estimated that by the end of March, from 1,200 to 1,500 families will have received aid of this type.

The ultimate purpose of this loan-and-grant program is simply to provide at least a minimum of security. It is hoped that, with enough food to eat and with shelter, the families will achieve some degree of stability. Better diet, fewer expenses, and more satisfactory living conditions will help them balance their precarious lives.

While the standard rehabilitation loan program offers direct aid only to families who are able to rent a family-sized farm, it is of vast significance in the over-all program to aid all farm labor, because it helps to check the slide of tenants and sharecroppers down into the ranks of "day hands." Furthermore, the guidance and technical advice of the rehabilitation supervisors in the area will be made available to the other low-income farmers who need it in developing their small live-at-home units.

"UNLOCATED" farm families, obviously, offer even more serious problems than those who have a place to work this year. To help them, the Government is undertaking a program of building small "labor homes" on scattered tracts of land. Farm families who are unable to find a home elsewhere but who are able to buy or rent a 5- or 10-acre tract of unimproved land will receive loans from the Farm Security Administration for the construction of low-cost farm homes—dwellings whose cost runs to

about \$500. These loans will also cover the expense of clearing the land and purchasing of necessary equipment for the development of "live-at-home" farming. The chief cash income of these families will come from small crop acreages and from cotton chopping and picking. Where the land is obtained at nominal rent under lease, the improvements will revert to the landlord in 10 or more years in lieu of adequate rent.

Farm Security is also considering the establishment of "labor homes" on land owned by the Government, and the financing of small groups of laborers, tenants and croppers in the joint development of unimproved lands. There are numbers of displaced farm families who are unable to make down payments on unimproved land and who need help badly. The possibilities of these programs are still being explored, however, and no action has been taken toward actual development.

Plans have likewise been made for a rapid expansion of Farm Security's standard rehabilitation program in the area. It is expected that 200 to 400 additional families will receive this type of aid this spring. The Farm Security Administration is transferring additional personnel into the area to handle the increase in borrowers.

JUST what the long-run success of these efforts to aid farm labor will be, it is, of course, too soon to estimate. They have been undertaken in response to urgent need and they have been enthusiastically welcomed. Since the demonstrations in January 1939 landlords and laborers together have engaged in numerous conferences on mutual problems, and have come to realize the Nation-wide significance of their local situation. State agencies, too, have taken an active part in the development of the program. The Missouri Employment Service is serving both landlord and laborer in an effort to smooth out the troubles of the area. Governor Stark's committee has taken an active hand in

formulating the present programs.
 * * * A start has been made on a program that might well be adopted in many other regions of the country—areas that feel, with Southeast Mis-

souri, the full impact of wage labor upon the old patterns of farming.

PHILIP BROWN,
Farm Security Administration.

“—For the American Farmer”

THE American market for the American farmer” is a popular slogan which may be variously interpreted. To some, it implies that there is something undesirable about the export market, or that producers of commodities entering international trade are less fortunate than those producing only for domestic markets. Exported or imported products, it is believed, necessarily must sell for less because they come into competition with the output of producers in other countries with lower standards of living and generally lower costs of production.

But the mere fact that a product is sold only in the domestic market, and does not come into competition with exports from competing nations, does not assure satisfactory prices or incomes to farmers. For example, if we compare recent prices of nine leading agricultural commodities which are consumed almost entirely in the domestic markets—and which receive little or no competition from foreign supplies—with prices of nine leading commodities which enter into international trade, we find that both groups average close to 80 percent of parity (see accompanying table). Although the group entering into international trade includes two commodities receiving considerable tariff protection, and other objections can be found to so simple a comparison, it is evident that agricultural products which enjoy an exclusively domestic market are not in much better relative position, on the average, than products

which enter into world competition with products from other surplus-producing nations.

Evidently, therefore, the “farm problem” is hardly one of merely assuring “the American market for the American farmer.” The kind of market encountered by producers of a commodity is one thing; the way in which that market is exploited is another. A “good” market can be turned into a “poor” one by overdoing it.

Prices Received by Farmers for Specified Commodities as Percentages of Parity, March 15, 1939

Commodity	U. S. price received by farmers as percentage of parity price March 15, 1939
Products consumed almost entirely in domestic markets:	Percent
Corn.....	68
Potatoes.....	89
Hay.....	54
Butterfat.....	81
Chickens.....	88
Eggs.....	71
Hogs.....	53
Lambs.....	107
Cattle.....	105
Average.....	80
Products affected by world conditions:	
Wheat.....	75
Rye.....	60
Flaxseed.....	88
Rice.....	61
Cotton.....	63
Cottonseed.....	93
Apples.....	69
Tobacco.....	104
Wool.....	117
Average.....	81

Source: Bureau of Agricultural Economics and Agricultural Marketing Service.

PROPOSALS designed to obtain the advantages of "the American market for the American farmer" may be viewed from the standpoint of two groups of commodities: those which are exported, and those which are imported.

For exported commodities, it is apparent that market prices prevailing in this country must be in line with world prices, after allowing for transportation and marketing costs. This may mean that the portion of a commodity which enters into domestic consumption sells at a price considerably lower than could be obtained for a somewhat smaller quantity sold entirely in this country, i. e., if there were no exportable "surplus." The problem is to separate the domestic and foreign markets with respect to price determination, obtaining a higher effective price in this country and allowing the surplus to enter world markets at competitive prices. Various methods have been proposed for accomplishing this objective, including the "equalization fee plan," export debentures, domestic price fixing, export subsidies, processing taxes with benefit payments, and the currently discussed certificate plan. All of these plans are based on exactly the same principle, the only differences being with respect to the mechanics of operation and the amount of direct Government subsidy involved.

Any administratively feasible plan of this kind can be made to obtain higher prices in the domestic market than the prices at which exports can be disposed of in world markets. But the reduction in domestic consumption resulting from the higher domestic price, and the lower price received for the remainder as a result of increased exports, may more than offset the effect on farm income of the higher price received for the domestically consumed portion of the product. The effect upon total income depends primarily upon certain characteristics of domestic and foreign demand which vary by commodities. As applied to cotton and wheat,

and possibly a few other export products, any administratively feasible plan of this nature can be expected to increase the total income received by producers from domestic and foreign sources combined. For other products, total income would be reduced. Thus, the advisability of attempting to segregate "the American market for the American farmer" by such means depends upon the particular commodity involved and the specific domestic and foreign demand conditions encountered.

OBTAINING "the American market for the American farmer," on the other hand, may be taken to refer to the commodities sold almost entirely in domestic markets, but which encounter competition from imports of the same or substitute products. In this case, the phrase is taken to mean the exclusion or drastic reduction of imports by means of tariffs or other import restrictions. Such action would have two effects: direct and indirect. The direct effects would arise from any increases in the prices of the affected commodities due to the reduction in domestic supplies as a result of the restrictions on imports. The indirect effects would be on the foreign demand for our exported products, and upon the production and prices of industrial products in this country.

OF the total volume of agricultural imports, slightly more than one-half is entirely noncompetitive, in the sense that their elimination would not affect the prices of any American farm products. Commodities in this group include coffee and rubber. Then there is another group consisting of four farm products: sugar, flaxseed, wool, and cattle hides. Wool and cattle hides are byproducts of meat production, and we could not materially increase their production without so adding to the domestic supplies of meat as to seriously affect the prices of meats. Hence, few people would propose the elimination of imports of these two commodities.

We can hardly expect to produce domestically all of the large proportion of our total consumption of sugar which now comes from foreign countries, because of the high costs of production which would be involved and the certain objection of consumers to any such attempt to force production into uneconomic channels. Likewise, we import a considerable part of the flaxseed consumed in this country, and farmers have shown no disposition to produce our entire domestic requirements despite a tariff of 65 cents per bushel. All of these four products—sugar, flaxseed, wool, and hides—already are under the protection of relatively high and effective tariff duties; i. e., producers of these commodities are receiving benefits of "the American market for the American farmer."

AFTER eliminating the strictly noncompetitive group and the four commodities just discussed, we have left all of the other agricultural imports, which amount to about 24 percent of total imports. It is quite evident, also, that it would be impossible to eliminate entirely imports of many of these commodities by means of any tariffs or import restrictions which consumers in this country would be willing to tolerate.

But even if all of these imports could be eliminated, it is doubtful that farm income could be increased by as much as 5 percent. In the first place, although the quantities of imports stated in terms of pounds or bushels may seem large absolutely, for many commodities they are quite small relative to total domestic consumption, and their elimination would produce only minor effects on prices as well as farm income. But even in those cases in which the price effect would be greater the effects on incomes received by domestic producers would not be correspondingly large, since consumers would buy less at the higher prices. If domestic demand had what is called "unit elasticity," a not unreasonable assumption for use as a general guide, consumers would

continue to pay about the same total amount of money for the commodity, and the incomes of producers in the United States would be increased only by the amount formerly paid to foreign suppliers for the imported commodities. The value of agricultural imports of this class represents a rather small proportion of total farm income.

OFFSETTING more or less these direct effects on farm income would be indirect effects injurious to both farmers and domestic consumers. Consumers, including farmers, would be getting less for their money spent for these commodities. And farmers know from experience that if agricultural tariffs were raised to the extent necessary to reduce imports as drastically as indicated, the rates on industrial products would be greatly increased also, reducing the means of payment of foreign nations now buying our farm products, and thereby reducing the demand for our exports. In addition, of course, prices paid by farmers for many industrial commodities would be increased by the higher tariff rates. Thus, whatever small direct benefits farmers as a whole might gain from the elimination of these imports would be partly or more than offset by the indirect losses. For the individual producers of specific commodities, however, the direct benefits might more than offset the indirect disadvantages.

"The American market for the American farmer" is a catch-phrase which has been used for many years by many different interests—for causes both good and bad—but it needs to be examined carefully by farmers before it is accepted as a guide to specific action designed to benefit agriculture. In some cases the application of this general "principle" can be made to yield desirable results for both individual groups of farmers and agriculture as a whole; in others, only harm would result. It is a matter calling for expert marksmanship with a rifle rather than a shotgun approach.

F. L. THOMSEN.

Wood Pulp—Southern Industry

MORE than half of the increase in United States production of wood pulp the last 30 years has been due to the development of the Southern wood pulp industry. Three decades ago there were few pulp mills in the South. The industry expanded as processes for manufacturing Southern pines into wood pulp were developed and more than doubled in the last 5 years as new low-cost production methods were put into use.

Fifty-one pulp mills, consuming approximately 14,000 cords of wood a day in a combined daily output of approximately 9,000 tons of dry pulp, are now operating in the South: Virginia, 10; Louisiana, 6; Alabama, 5; Florida, 5; North Carolina, 5; Tennessee, 4; Mississippi, 3; South Carolina, 3; Texas, 3; Arkansas, 2; Georgia, 2; Maryland, 2; West Virginia, 1. These mills as a rule make kraft paper and other types of paper products. A mill recently opened in Texas makes newsprint.

Southern mills produced nearly 2,800,000 tons of wood pulp in 1939. This figure compares with 1,308,000 tons in 1935, and with approximately 200,000 tons in 1910. The output in Southern mills last year constituted about 40 percent of the total United States production of 7,107,000 tons of wood pulp—the largest output on record. United States production has increased from 5,000,000 tons in 1935. This in turn compares with less than 2,500,000 tons in 1910.

BOTH the total United States production of wood pulp and the South's proportion of the whole are expected to increase as new low-cost pulp production methods are developed. Typical of the continuing progress in this technological field was the recent announcement that "the Forest Products Laboratory has made newsprint experimentally by mixing unbleached semichemical pulp from

Attention has been directed frequently in recent months to the rapidly expanding wood pulp industry in the South. Announcements have been made of new processes for the manufacture of wood pulp from Southern pines, and of the erection of new pulp and paper mills. How and why the industry has expanded, and the prospects for future development, are discussed in the accompanying article.—Ed.

Southern gum trees with groundwood pulp from Southern pines."

Additional stimulus has been given the industry recently by the prospect of diminishing competitive foreign sources of supplies of pulpwood and wood pulp. The principal foreign source of supply is Canada, but accessible forests in that country are becoming increasingly remote from existing mills. The European War may prevent any considerable expansion of Canadian mills, as it already has appreciably curtailed United States imports of pulp from Norway and Sweden.

Manufacturers of cellulose products also are looking toward Southern forests for supplies of raw materials. A recent news dispatch reported that a new rayon pulp mill is about to go into production in Florida. The South also is supplying increasing proportions of the Nation's lumber requirements, shipping large quantities to Central and North Atlantic as well as the Lake and Northeastern States.

EVIDENCE has been accumulated by the United States Forest Service that with proper forest management the production of wood pulp may yield the South an increasing and continuing source of income. About one-third of the Nation's 630,000,000 acres of forest lands is in the "Deep South" including Alabama, Arkansas,

Florida, Georgia, Louisiana, Mississippi, Oklahoma, and Texas. The trees grow quickly, the season is long, the forests are close to consuming markets. (In 1936 the harvest was divided as follows: Lumber, 53 percent; fuel wood, 22; cross ties, poles and piles 7½; farm use, 7½; veneer and cooperage, 6; pulpwood, 4. Estimates are, however, that more than 5,000,000 cords a year are now being cut for the pulp mills.)

"Proper forest management" includes adequate fire protection and usually some type of "selective" as opposed to "clear" cutting, or the taking of all marketable trees at a fell swoop. In the last 3 decades, 80 percent of the virgin timberlands of the South has been clear cut for sawlogs, poles and piling, and burned over. In spite of this fact, there are today extensive areas of second growth timber—not "full stocking" by any means, but the nucleus of fine future forests. If the same old clear cutting practices previously followed are now repeated with the new second growth that is marketable for pulpwood, there is real danger that some of the new mills may become in a few years "ghost mills" in the midst of denuded forest land.

Factors at present working toward such an unwanted outcome are: (1) The temptation of financially hard-pressed farmers and other forest land owners to cash in on the upswing in demand by clear cutting; (2) the practice of many contractors for the mills of buying timber by the acre and then removing every marketable stick of whatever size. Contractors interested in getting the wood out as cheaply as possible usually are not concerned with the condition of the land or forest resource afterwards.

FEDERAL and State foresters are informing farmers and land owners of the advantage of selective cutting—the selling of trees only as the trees attain a certain size, so that a continuing growth in the forest is assured and likewise a steady income for the owners. They are urging reforestation of cut-over areas. Some mill owners are joining in this work, using their own forest lands as demonstration areas. Better distribution of new mills with regard to the forest resources is also being advocated by many interested Southerners.

ALAN MACDONALD,
Forest Service.

Farm Income From Potatoes ¹

DURING the period 1910-39 cash farm income from the sale of potatoes has varied widely from year to year. As shown in the accompanying table, cash income fluctuated around an average of about 140 million dollars during the period 1910-15 but rose sharply during the World War years to a record high level of 398 million dollars in 1920. From 1921 to 1930 cash income from potatoes fluctuated from year to year around a relatively high average of about 228

million dollars and reflected a comparatively stable level of general demand conditions.

In 1931 and 1932, however, income from potatoes declined sharply, under the influence of declining consumer purchasing power, reaching a record low point of 90 million dollars in 1932. Except for 1935 and 1938, cash income since 1933 has been higher than the pre-World War average.

AN analysis of the annual changes in cash income from potatoes indicates that two factors have had important influence. The first is variation in the quantity of potatoes sold or available for sale, and the second is

¹ Basic data for estimates of income from potatoes furnished by Agricultural Marketing Service. Economic analysis prepared by Gustave Burmeister for the Farm Income Committee, Bureau of Agricultural Economics.

variation in the level of purchasing power of consumers. Since 1910 the demand for potatoes has been inelastic; that is, large quantities sold or available for sale tended to result in lower cash income to producers than did small quantities. Also, comparatively low levels of consumer purchasing power tended to result in lower cash income from potatoes than did high levels of purchasing power.

These two factors have operated largely through their effects on prices for potatoes. Large supplies available for sale, as in 1928, 1935, and 1938, tended to depress potato prices. An illustration of the effect of low consumer purchasing power on income from potatoes occurred in 1932. The slightly less-than-average quantity sold or available for sale in that year returned the smallest cash income from potatoes on record. In the previous year, 1931, and in the following year, 1933, practically the same quantity of potatoes was sold as in 1932, but in both years consumer purchasing power was higher and cash income from potatoes much higher.

IN MOST of the years since 1910 the quantity of potatoes sold during the calendar year has been between 200 and 260 million bushels. In measuring the changes in income from potatoes due to changes in the quantities sold, as shown in the upper half of the accompanying chart, income from potatoes has been adjusted for changes in the income of industrial workers. The bars in the chart show the most probable income from sales of various quantities of potatoes when the level of the income of industrial workers is equal to the 1924-29 average.

With income of industrial workers at the 1924-29 level, sales of about 200 million bushels would normally result in income from potatoes of about 375 million dollars. As sales increase, the income from potatoes declines, and with the sales at 260 million bushels the cash income would

amount to only about 175 million dollars, or 200 million dollars less than when sales are only 200 million bushels.

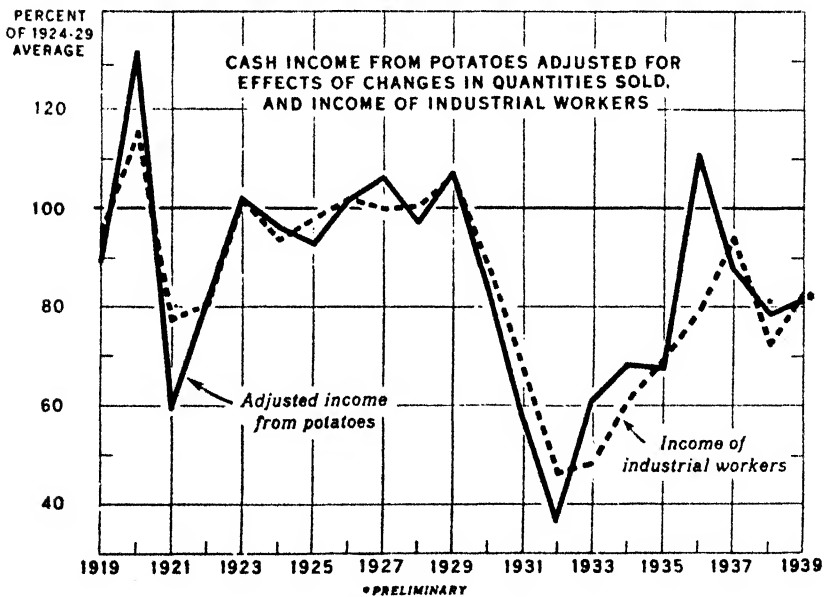
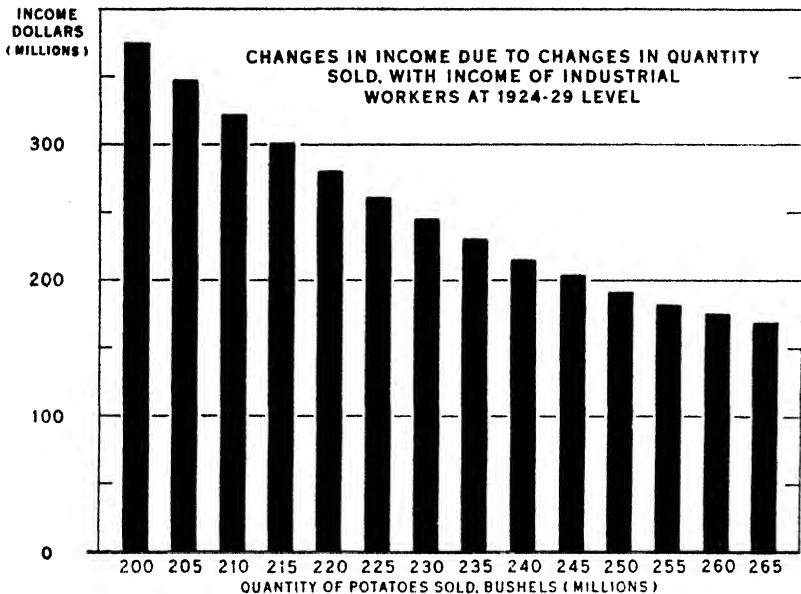
In the lower half of the accompanying chart, cash income from potatoes for the various years has been adjusted to remove the effects of changes in quantities sold. Thus adjusted, income from potatoes has then been compared with the index of income of industrial workers. It will be seen that, with a crop of given size, cash income from potatoes varies directly with changes in the level of income of industrial workers. That is, when the income of industrial workers is above average, the income from the sale of a given quantity of potatoes is usually also above average, and vice versa.

The combined effect of changes in quantities sold and in the purchasing power of consumers, as measured by the income of industrial workers, has largely accounted for the marked variations in income from potatoes since 1910. For example, in 1920, when a relatively small quantity of potatoes

United States: Cash Income, Value of Home Consumption, and Gross Income From Potatoes, 1910-39

Year	Cash income from sales of potatoes	Value of potatoes used for home consumption	Gross income from potatoes
	Million dollars	Million dollars	Million dollars
1910.....	125	44	169
1911.....	142	49	191
1912.....	176	57	233
1913.....	134	46	180
1914.....	144	47	191
1915.....	119	38	157
1916.....	194	64	258
1917.....	360	117	477
1918.....	269	90	359
1919.....	268	93	361
1920.....	398	125	523
1921.....	210	70	280
1922.....	192	63	255
1923.....	206	65	271
1924.....	189	56	245
1925.....	239	69	308
1926.....	338	97	435
1927.....	238	78	316
1928.....	178	54	232
1929.....	228	71	299
1930.....	244	77	321
1931.....	137	45	182
1932.....	90	34	124
1933.....	145	48	193
1934.....	142	45	187
1935.....	112	38	150
1936.....	230	60	290
1937.....	184	49	233
1938.....	128	39	167
1939.....	157		

**CHANGES IN CASH FARM INCOME FROM POTATOES RELATED TO
CHANGES IN QUANTITIES SOLD AND TO CHANGES IN INCOME
OF INDUSTRIAL WORKERS, UNITED STATES, 1919-39**



was sold and the incomes of industrial workers were the highest on record, the income from potatoes totaled 398 million dollars, the highest for any year since 1910. In 1938 the total quantity of potatoes sold was the largest on record, consumer income

was relatively low, and the cash income from potatoes totaling 128 million dollars was the smallest since 1935 and the fifth smallest on record.

O. C. STINE,
Chairman, Income Committee.

The Cold Storage Egg

THE cold-storage egg industry was developed originally—in the 1890's—as a device for making available to consumers an adequate supply of eggs the year round. It was intended to reduce the seasonal fluctuations in supply by carrying over the surplus of eggs produced in spring and summer to supplement the reduced production of fresh eggs in fall and winter. It accomplished this result, and was probably a principal factor operating to expand the poultry and egg industry in this country.

The cold-storage egg industry expanded rapidly. It was not long until some 11 million cases of shell eggs a year were going into the storage warehouses. This quantity was approximately 10 percent of the total production of eggs. Techniques for retarding the deterioration of quality of eggs in storage were developed from time to time. The gap between the quality of fresh and cold storage eggs was steadily narrowed. Cold storage egg legislation enacted in the early days of the industry went virtually into the discard.

Improvement in the quality of storage eggs has been an asset from the standpoint of the housewife and the manufacturer of food products in which eggs are used. And yet the quantity of shell eggs going into cold storage has declined in the last 10 years. Only about 6 million cases of shell eggs are now stored annually, as compared with 11 million cases as recently as 1930.

TWO factors responsible for the reduction in the storing of shell eggs have been the lengthening of the season of egg production, and the expansion of the frozen egg industry. During the last 10 years the production of fresh eggs during fall and winter has increased rapidly, and the seasonal variation in prices of eggs has shown a corresponding flattening. More con-

The storing of eggs is another industry which has undergone marked change in recent years. Formerly, practically all the eggs put into cold storage were stored in the shell. Now about half of all the eggs stored are broken out of the shell, frozen as whole eggs or as whites and yolks separately, and stored in 30-pound cans. As the production of frozen eggs has increased, the storing of eggs in the shell has declined. Another factor contributing to the decline in shell egg storage has been the lengthening of the season of egg production.—Ed.

sumers now are able to afford fresh eggs in November and December.

The practice of breaking and freezing eggs was begun by egg packers nearly 40 years ago in an effort to salvage eggs which could not readily be sold in the fresh markets nor stored in the shell. Food manufacturers bought these frozen products, and as the commercial food industries expanded the egg-freezing business increased. Better qualities of eggs were being frozen, and freezing operations became heaviest in the spring season of flush production of eggs.

PRODUCTION of frozen-egg products increased more than 200 percent during the decade of the 1920's, to approximately 155 million pounds in 1929. Production declined during the depression but then increased to a peak of 225 million pounds in 1937. The output was reduced sharply to 133 million pounds in 1938, but was increased again to a total of 198 million pounds last year. Imports of frozen-egg products declined from about 16 million pounds 20 years ago to less than 1 million pounds now.

Most of the egg-breaking and freezing plants are located in the Mississippi and Ohio River valleys. Additional plants are located in large cen-

ters of population on both the Atlantic and Pacific Coasts. In 1937 the States of Missouri, Illinois, Kansas, and Texas led in total volume of frozen-egg production. The frozen products are sold principally to large food manufacturers—mayonnaise and macaroni makers, bakers, and confectioners.

THE frozen-egg industry has been characterized by alternate periods of surplus production during the last 3 years. Another problem is an excess quantity of frozen albumen which acts as a depressing influence on the price level of both albumen and frozen yolks. During 1939, for example, there was a monthly average of approximately 7.5 million pounds more albumen in storage than there should have been in a proper relationship with the quantity of yolks.

Since albumen is the product chiefly in surplus, prices for frozen albumen are usually at low levels. For producers of frozen-egg products, therefore, to dispose of their output at a profitable price, the selling price of yolks must be held at a rather high level, and this in turn tends to restrict the consumption of frozen yolks.

The industry has been aware of this condition for several years and many attempts have been made to devise new uses for albumen for food as well as for industrial purposes. Recently the United States Department of Agriculture authorized its Western Research Laboratory at Berkeley, Calif., to carry on research aimed at finding new nonfood uses for all poultry products, which of course includes albumen.

United States: Production of Frozen Eggs, 1921-39 ¹

Year	Total frozen-egg products	Shell-egg equivalent
	Million pounds	Million cases
1921.....	46	1.3
1922.....	49	1.4
1923.....	71	2.0
1924.....	57	1.6
1925.....	79	2.3
1926.....	92	2.6
1927.....	120	3.7
1928.....	148	4.2
1929.....	155	4.4
1930.....	185	5.3
1931.....	152	4.3
1932.....	138	3.9
1933.....	171	4.9
1934.....	198	5.7
1935.....	206	5.9
1936.....	208	5.9
1937.....	• 225	6.4
1938.....	• 133	3.8
1939.....	• 198	5.7

¹ 1921-36 unpublished estimates made by U. S. Tariff Commission, based on original entry into cold storage.

² "Production of Frozen Eggs in the United States in 1937," Poultry Section, Agricultural Adjustment Administration.

³ Estimated.

IF IT is possible to discover new uses which will use significant quantities of albumen, it is believed that the price of frozen albumen might rise and thereby permit a commensurate decrease in the price of frozen yolks. The net result would be a stimulated demand for both albumen and yolk, and an increase in the total output of frozen-egg products. Some distributors also are experimenting in the use of 10- and even 5-pound cans of frozen-egg products to increase sales to small users.

C. C. WARREN,
*Agricultural Adjustment
Administration.*

Record: Wool production in the United States totaled 441,897,000 pounds in 1939, compared with 436,472,000 pounds in 1938. The number of sheep shorn was estimated at 47,394,000 head, compared with 46,609,000 head in 1938. The estimated average local market price of shorn wool in 1939 was 22.3 cents per pound compared with 19.2 cents in 1938. * * * World production of wool in 1939—estimated at about 3.6 billion pounds, exclusive of production in Russia and China—was the largest on record.

Proposed Studies of Livestock Marketing

IN the 1920's Federal and State research agencies were emphasizing marketing studies. In that decade we began to learn something about market demand and about trade practices. Along with the research came many specific proposals for doing something to improve marketing. Some of the results were the expansion and further development of market news services which had been started during the World War period, better grading and inspection of farm products, the regulation of certain farm products trade practices, the organization of many cooperative marketing associations, and the inauguration of outlook programs and economics services by the United States Department of Agriculture and by the State agricultural colleges.

In the 1930's the emphasis of agricultural economics work was more on problems of production adjustment, land use, soil conservation, and farm management. There are signs now of a definite revival of interest in marketing problems. The Bureau of Agricultural Economics is being urged to help the State agricultural colleges study a wide variety of marketing problems which are confronting producers of all sorts of agricultural commodities.

LIVESTOCK producers and marketing specialists in the North Central States have been to the fore in urging a renewed drive to improve the marketing of livestock products. The agricultural colleges in that area have set up a strong committee to organize and coordinate livestock marketing research. Details of the research program have not yet been decided upon, but the committee has presented a general outline of work to the Department and to the directors of the North Central Experiment Stations. These directors have approved in

principle a series of studies to be made by the colleges. They have asked that these studies be supplemented by research by the Bureau of Agricultural Economics.

The committee has proposed a wide variety of studies centering in two general problems fundamental to all agricultural marketing: (1) Efficiency in marketing; (2) the development and maintenance of a desirable degree and type of competition. These are important subjects. A real understanding of these two problems and of their implications to agriculture would go far toward perfecting a marketing system—for livestock and for agriculture as a whole.

MUCH research has dealt with the problem of efficiency in marketing. Usually, however, the studies have been limited to small details—how to operate a given milk plant, whether to pack apples in baskets or boxes, or how to handle and grade eggs on the farm. Much of this research has dealt with the efficiency of marketing functions performed by the farmer and by local marketing agencies. Too little attention has been given the important problems of efficiency of transportation, processing, handling, and selling in the central and terminal wholesale markets, and to the problem of food retailing.

There is need for broader studies to consider the efficiency of the marketing system as a whole and to suggest changes which will reduce the overall cost of the whole process between the time hogs—for example—leave the farm and the time the pork and other hog products are delivered to the ultimate consumer. This involves not only the efficiency of each separate unit in the processing-transporting-marketing chain. It involves an analysis of the number, sizes, types, and locations of such units as are required.

THE extent and kinds of competition in agricultural marketing is a subject which has not yet had enough attention by the agricultural economist. The papers read by Rowe, Hoffman, Nichols, and others at the farm economic meetings in Philadelphia last December indicate the importance of this subject as a basis for sound agricultural policies. So far, most of the work in monopoly and imperfect competition has been mainly either pure fact finding or pure theory. The agricultural economist must find a way of combining the two into a real analysis of the economic and social consequences of present methods of

competition and a consideration of the probable economic and social effects of various policies which might seek to change present competitive methods.

Have large-scale organizations in the meat-packing industry been able to develop greater efficiency in processing and distribution than small concerns? If we are to have further concentration of processing and marketing in the hands of large concerns, what degree and what kinds of regulation may be necessary to protect the farmer and the consuming public? These are likely to be big agricultural issues in the next decade.

FREDERICK V. WAUGH.

EXPORTS, IMPORTS

United States exports of cotton during the first six months of the European War were approximately twice the volume in the corresponding period a year earlier. Exports of pork products were above the low figures of a year ago. Exports of other leading commodities were greatly reduced.

United States imports of most commodities—including sugar, wool, tobacco, hides and skins, and canned beef—were above the quantities in the corresponding period of 1938-39. But there were substantial decreases in imports of flaxseed, cattle, and barley malt.

United States: Exports and Imports of Specified Agricultural Commodities, February 1939 and 1940, and September-February 1938-39 and 1939-40¹

Commodity	Unit	February		September-February	
		1939	1940 preliminary	1938-39	1939-40 preliminary
Exports:					
Pork:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Cured pork ²	Lb.....	5,235	6,417	30,609	37,450
Other pork ³	Lb.....	3,008	21,265	19,169	59,277
Total pork.....	Lb.....	8,243	27,682	49,778	96,727
Lard, including neutral.....	Lb.....	24,483	25,133	123,072	141,529
Wheat, including flour.....	Bu.....	11,946	3,816	49,459	23,428
Apples, fresh ⁴	Bu.....	1,230	158	9,336	2,455
Pears, fresh.....	Lb.....	2,175	772	129,260	62,865
Tobacco, leaf.....	Lb.....	34,729	17,737	306,660	176,674
Cotton, excluding linters (500 lb.).....	Bale.....	278	788	2,385	4,964
Imports:					
Cattle.....	No.....	70	39	334	282
Beef, canned including corned.....	Lb.....	3,132	6,517	34,029	44,239
Hides and skins ⁵	Lb.....	23,006	32,149	146,384	172,010
Barley malt.....	Lb.....	6,139	3,969	44,651	33,479
Sugar, cane (2,000 lb.).....	Ton.....	130	261	966	1,502
Flaxseed.....	Bu.....	2,248	1,763	10,126	5,451
Tobacco, leaf.....	Lb.....	4,554	4,830	28,066	30,641
Wool, excluding free in bond for use in carpets, etc.....	Lb.....	5,465	21,066	28,907	96,279

¹ Corrected to March 26.

² Includes hams, shoulders, bacon, and sides.

³ Includes fresh, frozen, pickled, salted, and canned.

⁴ Includes baskets, boxes and barrels, in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Source: Office of Foreign Agricultural Relations. Compiled from official records of the Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1923-25=100) ¹	Income of industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	Wholesale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in—				
					Living	Pro-duction	Living and production		
1925.....	104	98	101	151	164	147	157	176	270
1926.....	108	102	102	146	162	146	155	179	271
1927.....	106	100	100	139	159	145	153	179	277
1928.....	111	100	99	141	160	148	155	179	279
1929.....	119	107	99	139	158	147	153	180	281
1930.....	96	88	95	128	148	140	145	167	277
1931.....	81	67	88	107	126	122	124	180	253
1932.....	64	46	79	95	108	107	107	96	219
1933.....	76	48	76	96	109	108	109	85	187
1934.....	79	61	78	109	122	125	123	95	178
1935.....	90	69	80	117	124	126	125	103	180
1936.....	105	80	81	118	122	126	124	111	182
1937.....	110	94	84	126	128	135	130	126	187
1938.....	86	73	82	115	122	124	122	124	186
1939.....	105	83	82	113	120	122	121	124	.....
1939—March.....	98	79	82	112	119	122	120	.....	.....
April.....	92	75	82	111	.....	.....	120	121	.....
May.....	92	75	81	111	.....	.....	120	.....	.....
June.....	98	80	81	110	119	121	120	.....	.....
July.....	101	80	81	110	.....	.....	120	126	.....
August.....	103	83	81	109	.....	.....	119	.....	.....
September.....	111	86	82	115	122	123	122	.....	.....
October.....	121	91	82	116	.....	.....	123	126	.....
November.....	124	93	82	116	.....	.....	123	.....	.....
December.....	128	93	82	116	121	124	122	.....	.....
1940—January.....	119	93	82	116	.....	.....	122	119	.....
February.....	109	89	82	115	.....	.....	122	.....	.....
March.....	.....	.....	.....	.....	.....	.....	122	.....	.....

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Poultry and eggs	
1925.....	157	177	172	153	140	153	163	99
1926.....	131	122	138	143	147	152	159	94
1927.....	128	128	144	121	140	155	144	91
1928.....	130	152	176	159	151	158	153	96
1929.....	120	144	141	149	156	157	162	95
1930.....	100	102	162	140	133	137	129	87
1931.....	63	63	98	117	92	108	100	70
1932.....	44	47	82	102	63	83	82	61
1933.....	62	64	74	105	60	82	75	64
1934.....	93	99	100	103	68	95	89	73
1935.....	103	101	91	125	118	108	117	86
1936.....	108	100	100	111	121	119	115	92
1937.....	126	95	122	123	132	124	111	93
1938.....	74	70	73	101	114	109	108	78
1939.....	72	73	77	105	110	104	94	77
1939—March.....	66	71	81	110	116	100	88	76
April.....	67	70	82	95	114	95	87	74
May.....	72	72	85	88	112	92	85	75
June.....	73	73	93	105	107	94	83	74
July.....	66	73	80	99	107	96	89	74
August.....	64	71	70	99	101	100	90	74
September.....	83	76	73	117	117	107	102	80
October.....	77	74	73	128	112	112	108	80
November.....	79	75	66	123	107	117	117	80
December.....	87	82	65	96	101	118	97	79
1940—January.....	90	85	66	117	103	119	91	81
February.....	91	85	76	168	101	118	98	83
March.....	92	85	73	128	102	114	83	80

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1923=100, divided by its 1910-14 average of 58.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real-estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE: The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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NEWS COMES of a quick change in the European political front and the yeast of commodity speculation rises. Wheat goes to highest prices in 3 years, feed grains follow, hog prices climb too. Once more the general index of prices of farm products is close to 100. * * * But the index of prices that farmers pay to produce these products is 123. And so the exchange value of the farm products in terms of other goods remains in the low 80's. * * * Seven million farmers and members of their families, meanwhile, go ahead with a full program of spring work—putting in the new crops—employing some 2,500,000 hired hands at wages higher than last year's to help produce the food, the feed, the fibers needed by a domestic market slightly improved as to summer prospect and a foreign one still restricted by the exigencies of European War. * * * All of which sums up in highlight a mercurial agricultural situation and outlook at press time May 1, 1940.

Commodity Reviews

DEMAND: Improvement

SOME improvement is expected this summer in conditions affecting the domestic demand for farm products. The rate of decline in industrial production was considerably slower in March than in either of the 2 preceding months, and preliminary reports indicate there was only a small decline in April.

Recent developments affecting such important individual lines of activity as steel, textiles and residential building support the belief that industrial activity in general is now rounding bottom, and there will be some improvement by summer. Reduced output of steel and textile mills together accounted for about 80 percent of the entire decline in industrial production during the first quarter, but the contraction in new orders for products of these industries was halted in March, and some increase in incoming business has since occurred. Similarly there are signs of reviving interest in home building, following a relapse of several months' duration. Applications for F.H.A. insured home building loans have recently been larger than ever before, suggesting the probability of a spring upturn of something more than seasonal proportions.

Exports of industrial products have given increasing support to domestic economic conditions in recent months. Though the recent spread of the European War will reduce United States exports to Scandinavia, the more active character of the war and the relatively short ocean routes between the United States and Europe will favor American markets, and probably will result in still greater support for domestic industrial activity and consumer income.—P. H. BOLLINGER.

EXPORTS: Change

Spread of the war in Europe to Scandinavia has altered somewhat the

export outlook for United States farm products. Danish supplies of pork, dairy and poultry products are no longer available to the Allies. A larger portion of Allied purchases may now be made in American markets. The immediate effects may not be great, however, since there are ample supplies of pork in Great Britain. Exports of evaporated milk from the United States are not of great importance, but elimination of Denmark as a source of Allied supplies may tend to increase demand for the American product.

Despite the prospect of some improvement in the export markets for some American farm products, the net over-all effects of the war on farm product exports will probably continue to be unfavorable. Tobacco, fresh fruit and lard exports have been definitely restricted by the war, and growing import controls among European belligerent and neutral nations will similarly affect several other export items. Wheat exports will continue small, but this is owing largely to relatively high domestic prices induced by the poor domestic winter wheat prospect rather than to war. Cotton exports, now declining largely because subsidy payments are no longer being made on new export sales and because the European stocks of American cotton have been replenished, will not be helped by the war in Europe.—P. H. B.

PRICES: Higher

Most of the principal farm products except hogs, fruit, chickens, and eggs are selling for higher prices this spring than last. Over-all factor is the better domestic consumer demand. Best gains have been in wheat. Cotton is higher on larger exports and domestic mill consumption. Feed grains are higher partly because of the larger quantities needed to feed the increased numbers of livestock. Hogs are lower,

downed by supplies disproportionately larger than the increase in consumer demand.

Significant is the way in which prices of most farm products have held the sharp gains registered at the outbreak of the European War. The average of prices jumped 10 points last September. Since then, the average has fluctuated within 2 points below and 3 points above this figure.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1939			
April.....	89	120	74
May.....	90	120	75
June.....	89	120	74
July.....	89	120	74
August.....	88	119	74
September.....	98	122	80
October.....	97	122	80
November.....	97	122	80
December.....	96	122	79
1940			
January.....	99	122	81
February.....	101	122	83
March.....	97	122	80
April.....	98	123	80

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by producers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	April average, 1910-14	April 1939	March 1940	April 1940	Parity price April 1940
Cotton, lb.....	12.4	12.4	8.15	10.0	10.0	15.87
Corn, bu.....	64.2	63.4	45.4	56.0	58.6	82.2
Wheat, bu.....	88.4	89.3	57.8	85.0	88.9	113.2
Hay, ton.....	11.87	12.16	6.67	8.22	8.29	15.19
Potatoes, bu.....	69.7	68.8	75.2	77.0	83.8	87.6
Oats, bu.....	39.9	40.9	27.4	38.6	38.8	51.1
Soybeans, bu.....	do.	(²)	78.2	101.0	99.9	.....
Peanuts, lb.....	4.8	5.0	3.4	3.6	3.5	6.1
Beef cattle, cwt.....	5.21	5.50	7.08	7.00	7.16	6.67
Hogs, cwt.....	7.22	7.69	6.57	4.87	4.90	9.24
Chickens, lb.....	11.4	11.8	14.4	12.8	12.9	14.6
Eggs, doz.....	21.5	16.6	15.5	15.4	15.0	³ 21.5
Butterfat, lb.....	26.3	25.9	21.4	28.4	27.5	³ 33.8
Wool, lb.....	18.3	18.0	19.7	27.3	26.1	23.4
Veal calves, cwt.....	6.75	6.76	8.38	8.81	8.63	8.64
Lambs, cwt.....	5.87	6.46	7.88	8.05	8.14	7.51
Horses, each.....	136.60	140.40	81.50	78.20	76.60	174.80

¹ Revised.

² Prices not available.

³ Adjusted for seasonality.

meat animals, and poultry and eggs, and smaller Government payments. April income probably was less than in the same month last year, due to smaller Government payments.

Month and year	Income from marketings	Income from Government payments	Total
March:			
1940	\$534,000,000	\$67,000,000	\$601,000,000
1939	517,000,000	95,000,000	612,000,000
1938	510,000,000	60,000,000	570,000,000
January-March:			
1940	1,696,000,000	291,000,000	1,987,000,000
1939	1,581,000,000	192,000,000	1,773,000,000
1938	1,636,000,000	108,000,000	1,744,000,000

FARM WAGES: Higher

Farmers are paying slightly higher wages to hired hands this spring than last, the general level of farm wage rates the country over on April 1 being computed at 124 percent of the 1910-14 level as compared with 121 percent on the same date last year. Wages averaged \$27.45 per month with board as a national figure on April 1 this year, \$36.41 per month without board, \$1.26 per day with board, and \$1.55 per day without board.

The number of persons working on farms on April 1 this year was estimated at 9,797,000 as compared with 9,960,000 on April 1, 1939. Of the total, 2,113,000 were hired hands this April 1, compared with 2,187,000 a year earlier. The remainder were farm family workers. The reduction in employment this April compared with last was attributed to unseasonable conditions which retarded farm work.

COTTON: Prices Hold

Cotton prices seem to have been little affected by the change in the foreign political situation. The average for the 10 spot cotton markets was 10.67 cents for Middling $1\frac{1}{8}$ inch during the week ended April 27, as compared with 10.47 to 10.64 cents in the preceding 5 weeks, and with 9.02

cents in the corresponding week last year. Domestic mill activity was reported as having increased slightly during the first 3 weeks of April.

Principal foreign news of the month was the report of a rationing scheme restricting sales of cotton piece goods for domestic consumption in England to 75 percent of pre-war levels. The stated purpose is to permit mills to meet adequately the British requirements for military purposes and for export. It was also announced that freight quotas for shipment of American cotton to England had been reduced from 100,000 bales per month to 50,000 bales.

United States exports of cotton totaled 5,578,000 bales from August 1 to April 25, as compared with 2,965,000 for the same period last year, and with 5,053,000 bales 2 years ago. It was estimated that in mid-April about 1,000,000 bales upon which export bond had been posted under the subsidy program remained to be exported prior to August 1.

WHEAT: Price Rise

Domestic wheat prices in April advanced to highest figures since 1937. Factors in the rise included the German invasion of Denmark and Norway, pessimistic foreign crop news, and large Canadian export sales. Changes in wheat prices in the next few months are expected to continue to depend largely upon developments in the foreign political situation, weather conditions here and abroad, and upon the volume of overseas sales of North American wheat.

Meanwhile, the United States Crop Reporting Board increased (as of April 1) to 426 million bushels its indication of the size of the winter wheat crop in this country. This quantity plus 200 million bushels of spring wheat (tentative, on the basis of average yields on prospective plantings) plus a projected carry-over of 290 million bushels on July 1 next indicates a total domestic supply of more than 900 million bushels for 1940-41.

The supply in 1939-40 was 1,009 million bushels.

Reports from many important foreign producing areas indicate unsatisfactory growing conditions. Unfavorable weather over large areas of Europe resulted in heavy winter-kill. In some countries, wheat has been damaged by floods. Spring seeding also is reported as being "generally backward." Probabilities are that the 1940 world crop of wheat will be smaller than the 1939 production.

FEED GRAINS: Prices Up

Prices of feed grains and feedstuffs advanced sharply in April, reflecting the sudden change in the European political situation, and possibly the late spring and lack of moisture in large areas of the Corn Belt. Prices of all feed grains were 9 to 15 cents per bushel higher than in April a year ago, the general level of prices being supported by larger livestock numbers, a higher level of business activity, and a less favorable growing season this spring.

Production of the 4 principal feed grains—corn, oats, barley, and grain sorghums—may total 91 million tons this year, as compared with 97 million tons in 1939, and with 100 million tons average in the pre-drought years 1928-32. This volume of production

plus the prospective carry-over of feed grains would give a total supply a little smaller than in 1939-40, but with that exception the largest since 1932-33.

Production prospects are projected on the basis of farmers' planting intentions reported in March and a growing season about the same as the average for the years 1928-32. In the case of corn, some allowance is made for higher-than-average yields as a result of the use of hybrid seed. Disappearance of corn during the period October-March of 1939-40 was more than 100 million bushels larger than during the corresponding period a year earlier; nevertheless, the carry-over of corn on October 1 next may be 100 million bushels larger than the 573 million bushels carried over on October 1 last.

OILSEEDS: Production

Larger crops of soybeans, flaxseed and peanuts this year than last are indicated by farmers' intentions reports times average yields, after allowance for usual abandonment. No indication is available as yet for cottonseed. Production of soybeans may exceed 100 million bushels compared with 87 million in 1939; flaxseed may total 23 million bushels compared with 20 million;

Prices of feeds at Chicago in April¹ 1940

Feed	Price		Cost per pound of digestible nutrients	Cost per pound of protein
	Per bushel	Per pound		
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
Corn, No. 3 Yellow.....	61.1	1.09	1.38	
Oats, No. 3 White.....	43.4	1.36	1.90	
Barley, No. 3.....	² 54.5	1.14	1.45	
Grain sorghums, No. 2.....	³ 77.3	1.38	1.86	
Yellow milo.....				
	<i>Per ton dollars</i>			
Bran.....	26.50	1.32	1.86	10.00
Shorts.....	26.50	1.32	1.73	8.74
Brewer's dried grains.....	25.00	1.25	1.91	6.04
Gluten feed.....	22.30	1.12	1.37	3.07
Cottonseed meal.....	36.80	1.84	2.50	5.43
Linseed meal.....	33.40	1.67	2.14	5.46
Soybean meal.....	29.20	1.46	1.78	3.87
Tankage.....	47.60	2.38	3.33	5.14

¹ Feed grains, average for week ended April 13; other feeds, daily price for Apr. 16.

² Minneapolis.

³ Kansas City.

peanuts may be somewhat larger than the 1,180 million bushels produced last year.

Domestic demand for oilseeds in 1940-41 may be slightly stronger than in the current season, reflecting decreased production of lard and decreased supplies of feed grains per animal on farms. A reduction in supply of feed grains would tend to strengthen the demand for oilseed cake and meal, and hence the demand for oilseeds. As for linseed oil, no great change in industrial or building activity is now in prospect for the forthcoming marketing season.

United States exports of soybeans since the outbreak of European war have been the largest on record. The total of nearly 11 million bushels during the first 6 months of the war compares with less than 3 million in the like period a year earlier. Shipments have been principally to the Netherlands, and to Canada for transshipment to Europe. BAE said in April that American soybeans "may continue to hold their present favorable competitive position in European markets" next season, if the war in Europe continues.

CATTLE: Fewer on Feed

The number of cattle on feed in the Corn Belt has been reduced sharply since the beginning of this calendar year, and on April 1 was only 2 percent larger than on the same date a year ago. Feeders in this area indicated that marketings of fed cattle would be larger through June this year compared with last, but much smaller in July and August. After August, marketings of fed cattle may again be larger than a year earlier. Total cattle slaughter for the year as a whole may be no larger than in 1939, since it is expected that marketings of breeding stock will be reduced.

Cattle have been selling at somewhat lower prices to date this year than last, but the disparity has been much less than that in prices of hogs. Consumer demand for meats has been

better than in 1939, but not enough to offset the big increase in supplies of meats—especially of pork. Consumer demand this summer probably will continue stronger than a year earlier. The demand for feeder cattle may not be so strong this year as in 1938 and 1939, since available feed supplies are smaller and feed costs are higher.

Looking farther ahead, the livestock specialists see prospects that the number of cattle on farms may increase to largest figures on record during the next 4 or 5 years. Currently, there are 5 million fewer cattle than at the beginning of 1934, but this decrease may be more than made up in the next few years by increases in the Great Plains area, in the area east of the Mississippi River, and in States bordering the Mississippi on the West. Such a development, of course, would depend upon favorable weather and range conditions.

HOGS: Marketings Up

Marketings of hogs usually increase in May and June, then decline until the new spring crop begins to go to slaughter in September or October. This pattern should be followed this year, but marketings may be smaller next winter than last to the extent that the pig crop is smaller this spring. Biggest factor indicating a reduction in the pig crop this spring has been the continuing unfavorable ratio of hog prices to corn prices.

Hog prices recovered sharply in April from the 6-year low figures registered early in that month. Feed prices also went up, and there was little change in the hog-corn ratio. Reason for the sudden reversal in hog prices is not clear in view of the prospects for an increase in marketings this month and next. It is noteworthy, however, that prices declined from mid-January to early April, when hog marketings decreased about 30 percent. Economists look for a better domestic consumer demand for meats this spring and summer but not enough to raise prices to 1939 figures.

No immediate increase in United States exports of bacon and ham to Great Britain is in prospect as a result of occupation of Denmark by Germany. Great Britain has large stocks of bacon, recent purchases from Denmark had been sharply curtailed, and any large increases in purchases likely will be from Canada rather than the United States. Some increase in United States exports may occur later when British stocks are reduced.

LAMBS: Prices Up

Fed lambs have been higher priced this spring than last, chiefly on account of higher wool prices. In contrast, little difference has been noted in prices of spring lambs. AMS reported in mid-April considerable variation in condition of early lambs, ranging from "exceptionally good" in the Pacific Coast States to "only fair" in the Southeastern States. An abundance of feed in California was reported as "encouraging the holding of early lambs to attain maximum weights."

BAE said that marketings of early lambs probably will be larger this May and June than last, that a heavy marketing of both early lambs and yearlings from Texas is expected in these 2 months. AMS reported that producers in California would tend to delay deliveries to market until the end of April, and that this would bunch eastern shipments between the 20th of April and the middle of May.

Heavy market shipments of high-quality lambs were expected from Arizona during the latter half of April, and of yearling lambs from Texas in May and June. Producers in the Southeastern States reported that most lambs would be marketed later than is usual. Marketings from the Northwest in the latter half of May and in June probably will be heavy.

FRUITS: Little Damage

Deciduous fruit and nut trees in nearly all sections of the country came

through the winter with little or no freeze damage. Citrus trees in Florida and Texas were not injured seriously by the January-February cold wave. Early peaches were doing fairly well in the Southern States until sub-freezing temperatures in mid-April reduced prospects in many of the important areas of production. The combined intermediate and late supply of strawberries probably will be smaller this year than last.

Storage holdings of apples have been rapidly depleted despite the loss of export markets. Winter and spring citrus supplies also have dwindled fast. The California navel orange harvest will be finished in June. Latest reports indicate a slightly larger California Valencia crop this season than last, and the fruit is expected to be of better size and quality. Lemons also will be slightly more plentiful this season.

Marketings of the 1939 crop of apples probably will be finished by the end of June. Meanwhile, it is reported that apple trees in nearly all commercial sections of the country came through the winter with practically no damage from cold weather. Injury to buds from spring freezes, reported to April 1, was negligible except in a few areas. Pear trees in California and in most of the other producing areas of the country came through the winter in good condition.

Export prospects for apples and pears to Europe during the 1940-41 season are regarded as "distinctly unfavorable," and "there is little to indicate" that prospective Allied purchases of American dried fruit will be heavier during the coming season. The export movement of canned fruit has been relatively well maintained but no increase is expected during the next marketing period. United Kingdom imports of canned fruit were put under license in March.

POTATOES: Prices Down

Market shipments of early potatoes are increasing rapidly, and prices are

much below the high figures registered on both old and new potatoes a month ago. The rise in late March and early April reflected a temporary shortage of market supplies on account of the lateness of the new crop. But when shipments began to move in volume from Texas and California in late April, the prices of new potatoes broke sharply.

Production of early potatoes in north Florida and the lower valley of Texas was indicated at 2.3 million bushels, or about 10 percent more than in 1939. Harvesting of the early California crop also was well under way in late April. There was an increase of about 10 percent in acreage in California this season over last. Given good weather, the California crop may exceed the high record production of 11.1 million bushels last year.

Alabama reported a sizable increase in early potato plantings this season, but the crop was severely damaged by the April freeze, and the harvest probably will be delayed. There was considerable damage of early potatoes in Louisiana and Mississippi. In Georgia and the Carolinas normal yields are expected. Figures for most of the Southern States indicated delayed but rather heavy shipments in May and early June.

MILK: Production Up

Milk production is increasing seasonally. Peak months of production usually are May and June. The output in May last year exceeded 11 billion pounds, and in June the production was close to 11.5 billion. These figures may be exceeded this year—depending, of course, on the condition of pastures in this period—since there are more cows on farms. Seasonal declines in fluid milk prices were reported in April, ranging from 14 to 30 cents per hundredweight to producers, and averaging about 1 cent per quart to consumers.

Prices of the principal manufactured dairy products are much below the

winter peak, and some further seasonal decline is in prospect. It is expected, however, that prices during the coming storage season will average higher than in the summer of 1939. The past storage season was a favorable one for storage operations, and a fairly good storage demand is in prospect this summer.

Basis for the expectation of higher average prices this summer than last, for manufactured dairy products, includes the generally higher level of commodity prices.

EGGS: Increase

April is usually the month of largest egg production. This April was no exception. Production then declines rather sharply until late fall, then starts rising again to the April peak. Prices go down as production increases, and the price of eggs now is around the lows for the year. Prices of eggs are lower than at this time a year ago, whereas prices of feed are higher. This means less profit for egg producers.

BAE says that total production of eggs may be larger in the first half of this year than in the like period of 1939, reflecting the larger number of layers on farms. Large quantities of eggs have gone into storage, but the April 1 holdings of both shell eggs and frozen eggs were smaller this April 1 than last, and smaller than the 1935-39 average for that date. Production in the last half of the year may be smaller than in the corresponding period of 1939.

Poultry flocks probably are being culled more than is usual at this time of year, on account of the relatively high price of feed. Farmers the country over were averaging about 15.0 cents a dozen for eggs on April 15, as compared with 15.5 cents on that date last year. During the week ended April 27 it required 8.21 dozen eggs to buy 100 pounds of standard poultry ration at Chicago. This compares with 6.65 dozen a year earlier.

FRANK GEORGE

This Changing Agricultural World

I. Tobacco

TOBACCO production and consumption of the world have increased during the past two decades, but there has been a noticeable decline in international trade in the product. Important changes have taken place in the relative standing of most of the principal importing and exporting countries, and there has been a further shift to the production and use of the lighter, mild types of leaf in preference to dark types. There has also been a pronounced trend toward closer government control of leaf production and trade, and more supervision of the manufacture and sale of tobacco products.

These conditions have resulted in a decline in total exports of leaf from the United States and have brought about a shift to smaller exports of dark types and larger exports of flue-cured. The present military conflicts in Europe and the Orient have resulted in a sharp drop in United States exports for the current marketing year and may serve to accentuate a downward trend that appeared probable before the conflicts began.

THE increase in world production and consumption of tobacco has resulted from an upward trend in world population and a substantially higher per-capita consumption. There has been a decided increase in the number of smokers in the female population of many countries. The continued shift to cigarettes has also contributed to the increase in per-capita consumption. World leaf production, excluding China, during the first half of the 1920-29 decade is estimated to have been about 4.2 billion pounds annually. There was a pronounced upward trend during this period, which extended until 1931 when it totaled about 5.3 billion pounds. There was a sharp decline in 1932

Many changes have occurred in world agricultural production and trade during the last 20 years. Production has been expanded in importing countries, new areas have been developed in exporting countries. The situation is, simply, that as world markets for some commodities have dwindled, the competition for the remaining business has increased.

Artificial devices of all sorts have been used variously in the different countries to win what is commonly regarded as "a favorable balance of trade." The principal result to date is confusion and a world agriculture and trade thrown more out of joint. Now a European War with intensified embargoes and quotas and other restrictions multiplies the difficulties.

Where do we go from here? To get at the answer we asked economists in the Office of Foreign Agricultural Relations to set down as simply as may be the outstanding changes in world agriculture and trade during the last 20 years, and to indicate the discernible trends affecting the future of our principal farm commodities.

The accompanying article on tobacco is the first in a series on this subject. Subsequent articles will deal with wheat, cotton, fruits, and other commodities.—Ed.

followed by a renewed expansion, and for the past 5 years world production, excluding China, has averaged about 5.1 billion pounds.

Most of the increase in production has occurred outside the United States and has been in the lighter types and certain of the dark types that compete with leaf exported from the United States. Much of the increase has occurred in continental Europe, Canada, South Africa, certain of the Asiatic

countries, and to a lesser extent in South America. The only pronounced decreases have occurred in countries such as Cuba, Sumatra, and the Philippine Islands, which produce a surplus of cigar-type leaf.

IN continental Europe, where consumption has increased by about 200 million pounds during the past two decades, much of the expansion in leaf production has resulted from the attempt of deficit producing countries to attain self-sufficiency. The surplus countries of Europe have also increased their output and are now supplying a larger share of the European market. Germany, where consumption has expanded rapidly, has increased annual production by about 25 million pounds and has not increased imports; France has increased production by 25 million pounds and reduced imports by 20 million pounds; Italy, which formerly had an annual net deficit of about 50 million pounds, has increased production and now has a net annual surplus of near 10 million pounds. The surplus oriental-leaf producing countries of Bulgaria, Greece, and Turkey, have increased their combined production by about 100 million pounds and exports by about 75 million pounds.

In the United Kingdom, where the entire supply of leaf continues to be imported, the annual consumption during the past 20 years has increased by about 65 million pounds. In the early 1920's, when the annual consumption was about 150 million pounds, approximately 90 percent of the supply was imported from the United States, and the remainder divided between receipts from British Empire sources and imports from countries other than the United States. Since this period, there has been some increased consumption of American leaf, but much of the total increase has been accounted for by larger utilization of Empire leaf. During the past 5 years, total consumption has averaged about 215 million pounds, of which the

United States has supplied about 74 percent; and Empire sources, namely, South Africa, India, and Canada, most of the remaining 26 percent. In addition to the trend toward a decrease in the proportion of American leaf used in the United Kingdom, there has been a continuation of the shift from fire- and air-cured leaf to flue-cured. Fifteen to twenty years ago, approximately 40 percent of all American leaf used in the United Kingdom was of the fire- and air-cured types, whereas for the past 5 years only about 5 percent has been of these types, and 95 percent flue-cured.

DEVELOPMENTS in the Far Eastern Countries of China, Manchuria, the Japanese Empire, India, and the Netherlands Indies, have also been unfavorable to American tobacco interests. Consumption of leaf in the form of cigarettes, the only product in which American or any other imported leaf is extensively used in these countries, has increased from about 178 million pounds annually during the 5 years 1920-24, to approximately 366 million pounds during the past 5 years. The quantity of American tobacco used, however, which has been almost entirely flue-cured, has in recent years been about 10 million pounds below that consumed in the earlier period, and in addition much of it has been stems, while formerly only leaf was used.

The situation appears even more unfavorable when the recent consumption is compared with that during the period 1928-31. Through this period the utilization of American flue-cured was at its peak and totaled about 182 million pounds annually, or approximately 60 percent of total leaf consumed in cigarettes. During the past 5 years it has declined to about 74 million pounds annually, or approximately 20 percent of the total. This rapid decline has resulted from an expansion in the domestic production of flue-cured. The combined production of the above countries has been in-

creased from an average annual output between 1920 and 1924 of about 50 million pounds to approximately 275 million pounds during the past 5 years.

The trend of developments in Canada, Central and South America, South Africa, and other areas that are of less importance has been somewhat comparable with that in the more important areas. Leaf production in Canada, largely flue-cured, has been increased from about 22 million pounds annually in the early 1920's to approximately 76 million pounds during the past 5 years. Leaf exports from the United States to Canada have declined from about 14.3 to 4.5 million pounds annually. Central and South American countries have expanded production and curtailed imports, and South African countries have greatly increased their production and export.

THE general tendency of individual countries and Empire areas toward self-sufficiency has, in spite of increased world production and consumption of tobacco, reduced international trade in leaf. Exports from the United States (which normally account for 40 to 45 percent of the yearly quantity of leaf entering world trade) during the past 5 years have been about 80 million pounds below that during the early 1920's, and there has been a substantial decrease in shipments from the Netherlands Indies, Cuba, the Philippine Islands, and certain other surplus-producing areas. Part of the decline from these areas has been offset by increased shipments from British Empire areas, China, the Japanese Empire, and certain European and South American countries.

Measures that importing countries have employed to attain self-sufficiency, and which have acted to curtail international trade in leaf, include higher import duties and preferential tariffs, monopoly control, import quotas and exchange control, barter and clearing agreements, taxes on tobacco products, and subsidized domestic leaf

production. Aside from monopoly countries, of which the number has increased in recent years, practically every country has increased its import duties on tobacco, and in the case of Empire countries, duty preferences have been granted on leaf originating within the Empire. The most striking examples of duty preferences and those which have been of greatest importance in curtailing American leaf exports have been in the British Empire. Since 1932 the United Kingdom has maintained a preference of about 50 cents per pound on leaf imported from Empire sources, and many of the other countries in the Empire have allowed a substantial preference.

Several of the European countries have set up exchange, barter, or clearing arrangements, which tend to restrict their purchases of tobacco to countries with which they have a favorable or balanced trade, or to those willing to accept goods in exchange for tobacco. Countries with limited foreign exchange and which cannot successfully trade their products for leaf have subsidized domestic leaf production through higher prices or lower excise taxes on products made from domestic leaf.

THE military conflicts in the Orient and Europe have intensified the tendency toward self-sufficiency and caused a further disruption in the international trade in tobacco. Since 1938 Japan has prohibited the import of tobacco except from Manchuria and occupied areas in China, and at present the Japanese are expanding flue-cured production in the areas under their control, which expansion, if continued at the rate of the past 2 years, will soon permit a substantial export.

The necessity of conserving exchange for the purchase of war materials has caused the United Kingdom, France, and practically all of their Empire countries to regulate tobacco imports through the use of exchange control or import permits. Since September 1939, the United

Kingdom has refused exchange for payment of American leaf. In the meantime, however, these countries have entered into an agreement with Turkey, which provides for an annual import of Turkish leaf over a period of 20 years that is several times their usual small purchases of such leaf. Negotiations for similar arrangements with Greece are reported to be under consideration, and an increased effort is being made to secure more leaf from their colonies. Other belligerent countries, as well as some of the neutrals within the European war area, have adopted the same general policy of restricting imports except from their colonies, allied countries, or countries that they seek to secure as allies through special trade concessions.

The combined effect has been to cause a sharp curtailment in exports of American leaf. It appears, however, that as stocks of American leaf abroad are diminished the importing countries will need to renew their purchases. They may, however, be somewhat below the volume of recent years. The extra impetus that has been given to the use of leaf from competitive sources may increase the trend to the use of smaller portions of American leaf abroad, which has been in evidence for some years. If this development is not accompanied by a general increase in tobacco consumption, the volume of American exports will be reduced.

J. BARNARD GIBBS,
Office of Foreign Agricultural Relations.

The Migrant Farm Laborer

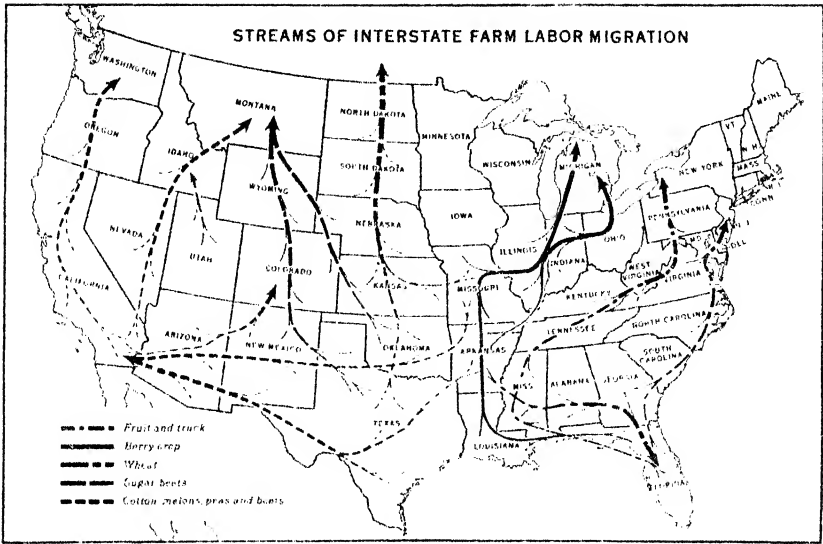
TENS of thousands of farm laborers the country over are looking for jobs. Principally they are the seasonal workers commonly classed as migrants finding a few days or a few weeks of work and then moving on. Estimates vary as to the number of these migrants—from 1,000,000 to 3,000,000 during seasonal peaks of farm work in early summer and fall. All are seeking employment in an industry in which a combination of factors have operated to reduce employment opportunities the last 10 years.

These factors have included a rapid increase in farm mechanization, the substitution of motor vehicles and tractors for animal power, and increased productivity flowing from improved cultural and feeding practices. Vast areas of crop lands have been released from feed production, and less labor is needed now to produce for domestic needs and a restricted export demand. Meanwhile—in the last 10 years—the farm population has increased by nearly 2,000,000 persons. Many of these resident farm people

have no work, and yet the army of migratory workers increases.

A GOOD deal of misinformation has been published regarding the agricultural migrant. Generalization is based upon isolated examples, estimates vary widely even as to the total number of migrants, exaggerations of all sorts are drawn as to living and working conditions. The trouble is, that although a number of scattered surveys have been made of the migrant situation, there is little information with which to form a national picture. The surveys have, however, revealed some serious economic and social situations.

So far as can be determined by available information, practically all agricultural migrants are of American birth. Many were once farm operators—some as owners, others as tenants, some as sharecroppers. Many have always been farm laborers. Many include the industrially unemployed who have turned to agriculture in search of subsistence. Many hope to resettle and make a living in new



places. Others want no more than seasonal employment.

The average migratory laborer obtains, at best, only irregular employment. Many have to resort to relief. One California study reported an average of 5.9 months of employment, families averaging 1.6 workers earning on the whole \$289 a year, 93 percent of families not earning more than \$600 a year. A survey of sugar beet laborer families revealed average season's earnings totaling \$410.

IT IS commonly assumed that migrants follow the crops clear across the country from south to north. Actually, most of them travel and work over shorter distances. Workers join and leave the stream all along the way. Some leave the northward movement of one operation to return south to work in later farm jobs. The end of a season finds migrants working not only at the northern end of the so-called migratory routes, but also at intermediate points. Not all migrants are on the road or at work at the same time. The greatest numbers are probably reached in midsummer.

One of the so-called migratory routes starts in Florida and skirts the Atlantic coast to New York State, covering truck, berry, and orchard crops. An-

other takes in Louisiana and north-western Arkansas for strawberry picking, other central Mississippi Valley points, and ends in Michigan. The combine has so largely displaced the binder, thresher, and human labor that the wheat harvest of the Great Plains from Texas to Canada is a decreasing attraction to migrants.

A greater variety of crops is handled along the coast-long western route than on any other. At the southern end of this route lies the Imperial Valley of California. Within Texas, there are migrant routes from the citrus and truck crops of the Rio Grande Valley through the cotton crop to the Panhandle.

Considerable labor moves to the sugar beet-producing areas east of the Rocky Mountains. Some of the sugar beet labor originates in Texas and New Mexico, follows the east side of the range northward, and branches north-eastward. This sugar beet migration is characterized by the fact that most of the migrants remain on the same farms during the entire production season. Surveys show, however, that sugar beet labor needs are being increasingly met by local laborers, many of whom are former migrants.

JOSIAH C. FOLSOM.

Income From Chickens and Eggs¹

CASH farm income from chickens and eggs in 1939 was about 636 million dollars. This was 40 percent less than in 1929 but 40 percent above the 1910-14 average.

Cash farm income from chickens and eggs averaged about 454 million dollars in the period 1910-14. Sales rose slightly from 1910 to 1920, while prices more than doubled, and cash farm income exceeded 1 billion dollars in 1919 and 1920. After the deflation of 1921-22, prices remained relatively stable until the recent depression, but the quantities of eggs and chickens sold increased and in 1928-29 were more than one-third larger than in the years 1918-20. The increase in volume of sales was sufficient to increase income in spite of declining prices. The depression beginning in 1929 caused prices and income to fall sharply, and production declined moderately.

CASH income from the sale of eggs averages about twice as much as cash income from the sale of chickens. The variations in income from the two sources have not followed exactly parallel courses. Income from eggs fell off much more sharply from 1920 to 1921 than did income from chickens and increased less rapidly from 1921 to 1929. As a result, cash income from eggs in 1929 was 5 percent below the peak reached in 1920, while cash income from chickens in 1929 was 18 percent above the previous peak in 1920.

The price of eggs appears to be more sensitive than the price of chickens to changes in supply. Both the numbers of chickens and of eggs sold increased 38 percent from 1920 to 1929. However, prices of chickens were 14 percent

lower in 1929 than in 1920, whereas egg prices were 31 percent lower. These same trends are apparent when production and prices are compared with the pre-World War average. The same price disparity was evident in 1939. The number of eggs sold was 45 percent larger in 1939 than in 1910-14 and the number of chickens sold was 43 percent larger. However, egg prices were 12 percent lower than in 1910-14, whereas chicken prices were 20 percent higher, so that cash income from eggs was 28 percent larger and cash income from chickens was 71 percent larger in 1939 than in 1910-14.

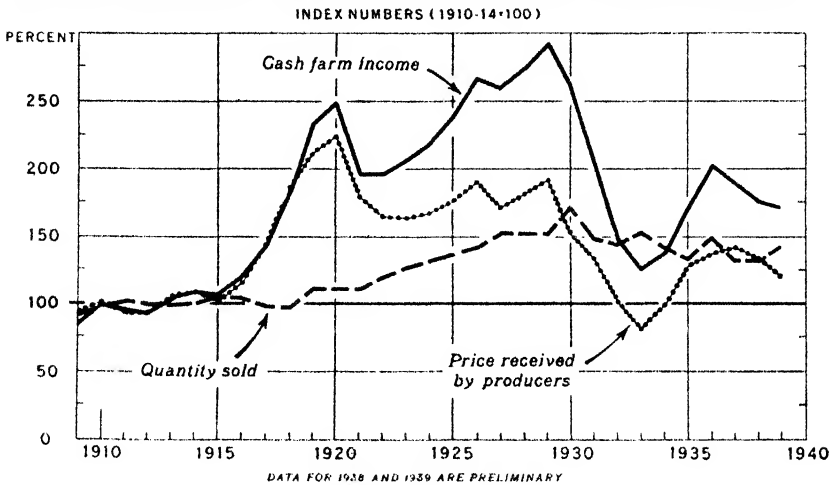
United States: Cash Income and Gross Income from Chickens and Eggs, 1909-39

Year	Chickens		Eggs	
	Cash income	Gross income	Cash income	Gross income
	Million dollars	Million dollars	Million dollars	Million dollars
1909.....	109	200	295	403
1910.....	127	232	331	449
1911.....	123	220	304	412
1912.....	120	215	339	457
1913.....	132	239	321	436
1914.....	138	248	336	456
1915.....	134	235	341	464
1916.....	152	262	375	509
1917.....	184	324	523	704
1918.....	232	425	599	805
1919.....	296	502	762	1,011
1920.....	317	525	781	1,039
1921.....	252	421	528	700
1922.....	250	412	506	664
1923.....	262	429	583	748
1924.....	278	440	585	741
1925.....	305	478	692	857
1926.....	340	531	695	870
1927.....	333	512	626	782
1928.....	350	529	709	877
1929.....	374	569	740	912
1930.....	333	495	606	751
1931.....	258	390	434	546
1932.....	189	293	324	412
1933.....	161	247	309	394
1934.....	175	271	370	474
1935.....	217	344	491	629
1936.....	269	405	466	600
1937.....	241	380	513	651
1938 ¹	226	358	473	608
1939 ¹	219	-----	417	-----

¹ Basic data for estimates of income from chickens and eggs were furnished by Agricultural Marketing Service. Economic analysis prepared by R. J. Foote for the Farm Income Committee, Bureau of Agricultural Economics.

¹ Preliminary.

CHICKENS: SALES, PRICE, AND CASH INCOME, UNITED STATES, 1909-39

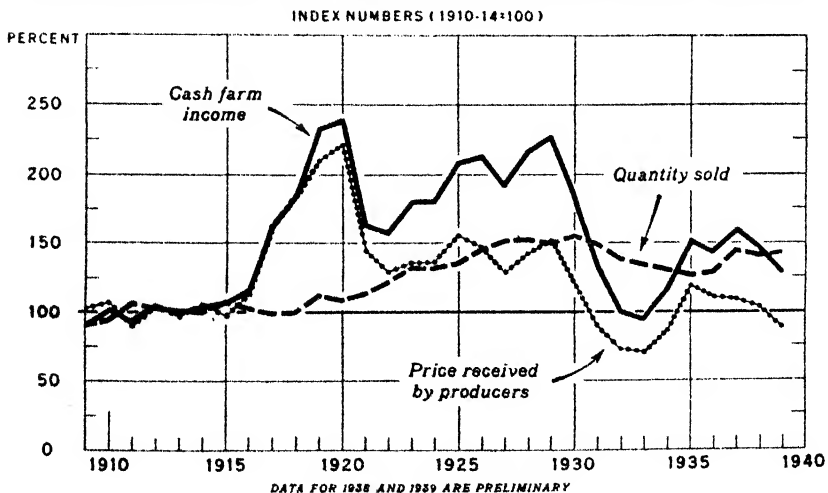


THE accompanying charts show that the year-to-year changes in income from chickens and eggs have been brought about to a much greater extent by fluctuations in prices than by changes in quantities sold. However, in certain periods changes in the purchasing power of consumers and in the level of wholesale food prices have been more important in causing fluctuations in prices than have been changes in supplies of chickens and eggs. For this reason, prices have frequently in-

creased while sales were increasing and have decreased while sales were decreasing. Examples will be found in the periods 1922 to 1925 and 1930 to 1932. This does not mean that changes in supply do not affect prices but only that the effects of changes in supply are frequently more than offset by the opposite effects of demand conditions.

RELATIVE to cash income, the value of chickens and eggs used

EGGS: SALES, PRICE, AND CASH INCOME, UNITED STATES, 1909-39



for home consumption on the farm where produced has declined since the period before the World War. In 1910-14 home consumption of chickens represented about 45 percent of the gross income from chickens, as compared to about 35 percent in 1925-29 and about 36 percent in 1934-38. In the case of eggs, home consumption declined from about 26 percent of

gross income in 1910-14 to about 20 percent in 1925-29 and then gradually rose to about 22 percent in 1934-38. This decline in the relative importance of home consumption has not been due to decreases in the quantities consumed on the farm where produced but to increases in quantities sold.

O. C. STINE,
Farm Income Committee.

Commodity Credit Corporation Loans

DURING 1939 the Commodity Credit Corporation made loans to producers and producer-cooperatives on twelve commodities: cotton, corn, wheat, rye, tobacco, peanuts, figs, butter, wool, mohair, turpentine, and rosin.

The accompanying table summarizes by commodities and years the loans made by Commodity Credit Corporation since its inception in 1933. The total quantities of the commodities on which loans have been made, the approximate average loan rate per unit, and the amounts of loans outstanding, plus the stocks held by the Corporation, on March 30, 1940, are indicated.

The largest loans have been made in connection with the cotton, wheat, and corn adjustment programs of the Agricultural Adjustment Administration. The Agricultural Adjustment Act of 1938, as amended, makes these loans mandatory under certain conditions. The Act sets forth a formula for determining the loan rate on corn as well as limits within which the loan rates shall be fixed for cotton and wheat, namely, 52 to 75 percent of parity price.

THE heavier exports of cotton this season, brought about by increased foreign demand and the export subsidy, caused cotton prices to rise substantially above the loan rate. As a result, only a few thousand bales of cotton came under the 1939 cotton loan. Moreover, by March 30, 1940,

loans on approximately 1,821,000 bales of the 1938 loan cotton were liquidated at a profit to growers. This liquidation is expected to continue; and loan stocks of 1938 cotton may fall below 2 million bales by the end of the current cotton season on July 31, 1940.

The short crop prospects for 1940 winter wheat, along with an increase in foreign demand, have resulted in a marked rise in wheat prices since the wheat loans were made last summer. Consequently, many wheat producers already have paid up their loans; and current liquidation of the remaining loans on 1939 wheat is proceeding in substantial volume. On March 30, 1940, the Corporation owned no wheat.

CORN loans on the 1939 crop, at the rate of 57 cents per bushel, were reported in a quantity of over 260 million bushels by the end of March, and it is expected that the total will have increased another 40 million bushels before the closing of the program. The total stocks of corn under loan and owned by the Corporation on March 30, 1940, approximated 514 million bushels, which is about double the quantity a year ago. Inasmuch as farm prices of corn last fall were below the loan rate, the Corporation extended the maturity of the loan on about 160 million bushels of 1937 and 1938 corn, most of which was resealed on the farms. In addition the Corporation

took title to approximately 90 million bushels of 1937 and 1938 loan corn.

The wool loan programs in 1938 and 1939 placed a bottom under wool prices and permitted wool growers to carry a part of their clip until demand conditions improved and prices advanced. All of the 1938 wool loans have now been repaid, and producers have sold their wool at a profit. Only an eighth of the 1939 wool loans were still outstanding on March 30, 1940.

In the 1939-40 tobacco season the Corporation made some large purchases to avert a badly disorganized

market and ruinously low prices to tobacco growers, after the outbreak of the European War caused an abrupt withdrawal of large foreign buyers.

CARL B. ROBBINS,
President,
Commodity Credit Corporation.

[The Commodity Credit Corporation was transferred to the Department of Agriculture by the President's Reorganization Plan No. 1, effective July 1, 1939; previously, as an independent Governmental agency, the Corporation had operated in close affiliation with the Reconstruction Finance Corporation.]

Commodity Credit Corporation Loans

March 30, 1940

[In thousands]

Commodity and year of loan	Total quantity placed under loan	Average loan rate per unit	Loans outstanding and commodities owned	
			Quantity	Book value ¹
COTTON				
	<i>Bales</i>	<i>Pounds</i>	<i>Bales</i>	<i>Dollars</i>
1933	1,926	10¢		
1934	4,632	12¢	2 1,557	2 122,500
1935	115	10¢		
1937	5,295	8.7¢	2 5,093	2 255,642
1938	4,482	9.0¢	2,661	130,700
1939	25	8.8¢	22	1,005
	16,475		9,333	509,847
CORN				
	<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>	
1933	267,758	45¢		
1934	20,075	55¢		
1935	30,966	45¢		
1936	158	55¢		
1937	47,117	48.5¢	510	294
1938	229,837	57¢	160,826	101,492
CORN OWNED ⁴				
1939	261,357	57¢	2 91,235	2 56,664
			261,193	148,705
	857,268		513,764	307,155
WHEAT				
1938	85,745	60¢	1,282	779
1939	167,566	70¢	104,803	73,905
	253,311		106,085	74,684
RYE				
1939	1,500	38¢	1,181	446
TOBACCO				
	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	
1931-5	69,755	12.0¢	15,898	2 2,965
1937	5,627	10.6¢	836	2 1
1939:				
Wisconsin	708	4.9¢	279	14
Other ²	177,082	20.8¢	2 177,082	2 36,827
	253,172		194,095	39,807
Peanuts				
	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	
1937	86.3	\$80.00		
1938	121.4	57.82		
1939	13.1	61.94	7.2	445
	220.8		7.2	445

See footnotes at end of table.

Commodity Credit Corporation Loans—Continued

Commodity and year of loan	Total quantity placed under loan	Average loan rate per unit	Loans outstanding and commodities owned	
			Quantity	Book value
PRUNES	<i>Bales</i>	<i>Pounds</i>	<i>Bales</i>	<i>Dollars</i>
1937.....	56.1	\$40.00		
1938.....	22.8	17.41		
	78.9			
RAISINS				
1937.....	22.6	\$55.00		
1938.....	58.8	50.00	42.1	1,183
	70.4		42.1	1,183
HOPS	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	
1938.....	7,077	20¢	4,076	1,047
PECANS				
1938.....	3,705	10¢	2,005	302
FIGS	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	
1937.....	4.2	\$20.12		
1938.....	7.4	\$16.92		
1939.....	3.0	\$16.85	1.5	44
	14.6		1.5	44
DATES	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	
1937.....	1,533	4¢		
BUTTER				
1938.....	114,264	25.5¢		
1939.....	12,836	23.4¢	717	194
	127,100		717	194
WOOL AND MOHAIR				
1938.....	19,179	18¢		
1939.....	8,943	18¢	1,125	188
	28,122		1,125	188
NAVAL STORES				
1934:				
Turpentine—gallons.....	8,049	\$0.46		
Rosin—barrels.....	370	\$4.40		
1938:				
Turpentine—gallons.....	9,742	\$0.21		
Rosin—barrels.....	837	\$10.52	538	7,149
1939:				
Turpentine—gallons.....	6,154	\$0.20	4,482	7,903
Rosin—barrels.....	667	\$11.39	602	
				15,052
Total loans outstanding.....				478,761
Total commodities owned.....				471,033
Grand total.....				950,894

¹ Accrued and unpaid interest and warehouse charges not included.

² Owned by Commodity Credit Corporation.

³ Does not include 28,789,032 bushels of 1937 resealed corn.

⁴ Includes corn of 1937 and 1938 crop years. Break-down by crop years not available.

⁵ Does not include 169,888,355 bushels of 1937 and 1938 corn loans renewed and extended, most of which was resealed on farms.

⁶ Balance due on notes of associations.

NOTE.—Loan rates for the various commodities listed in this article are rough averages of all loans made, taking into account different rates on different grades as well as freight differentials.

Index

A general index of articles which have appeared in The Agricultural Situation during the last 3 years—1937–39—is obtainable from the Bureau of Agricultural Economics, Washington, D. C.

The Hog Situation: An Analysis

LARGE marketings of hogs, a record domestic production of food fats and oils, and a weaker consumer demand for pork than for other meats are the chief factors responsible for the relatively low level of hog prices in the past 6 months. Three large corn crops in a row have brought about a marked recovery in hog production from the low level resulting from the droughts of 1934 and 1936. Low hog prices in relation to corn prices probably will bring about a decrease in both the spring and fall pig crops of 1940. Reductions in the pig crops this year will mean smaller hog marketings in 1941 than in 1940.

FARMERS who have raised hogs over a long period of years appreciate better than anyone else that hog prices and the income from hogs have sharp ups and downs. In the past 2½ years, however, there have been very few "ups" in prices. In August 1937 the average price of hogs at Chicago reached about \$12 per 100 pounds, whereas in March of this year the average was down to about \$5.

In the 1936-37 marketing year, when supplies of hogs were small, the Chicago average price was about \$10.35 per 100 pounds. Hog marketings did not increase much in 1937-38, but the average price dropped to about \$8.40, chiefly because of the decline in consumer demand for hog products brought about by the business recession that developed in late 1937. Total incomes of industrial workers declined nearly 30 percent from the middle of 1937 to the middle of 1938. Such a decrease in incomes of consumers necessarily reduced considerably the amount of money they could spend for meats.

In 1938-39, prices declined further, and the Chicago average for that year was about \$7. Consumer demand for pork and lard was better than in

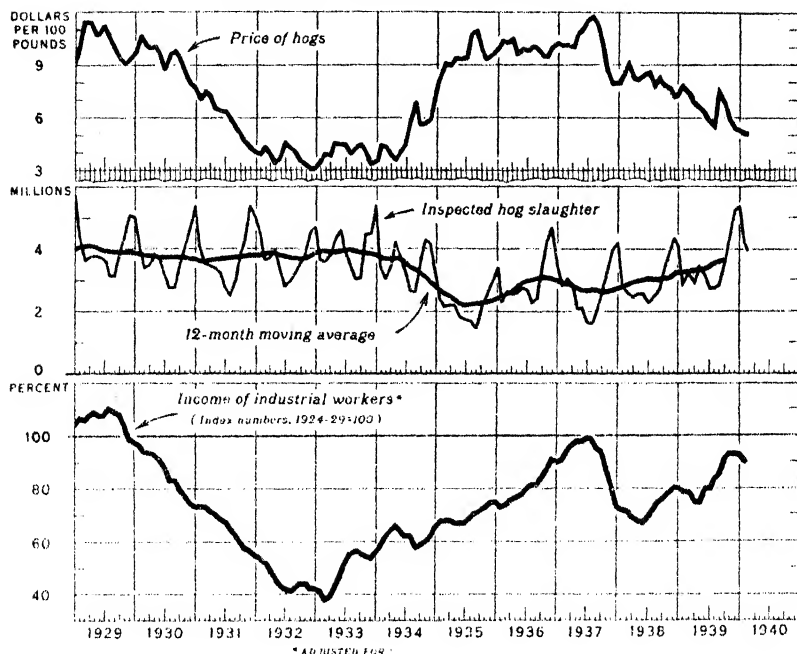
1937-38, but this improvement was more than offset by the marked increase in hog marketings. Inspected hog slaughter (the most reliable indication of marketings) increased about 15 percent from 1937-38 to 1938-39.

CHIEFLY as a result of the large corn crops in 1937, 1938, and 1939, and the favorable ratio of hog prices to corn prices, the number of pigs raised increased sharply in both 1938 and 1939. The 1939 pig crop was 19 percent greater than that of 1938. It was the largest crop in the past 16 years. The increase in the number of pigs raised in 1939 was reflected in a 23-percent increase in inspected hog slaughter in the first half of the present marketing year which began last October. Cattle marketings in most recent months have been somewhat larger than a year earlier. In the first quarter of 1940 the total dressed weight of livestock slaughtered under Federal inspection was the second largest for the quarter in the past 20 years.

As in 1938-39, the increase in hog marketings this year more than offset the effects of improvement in consumer demand upon hog prices. The average price of hogs at Chicago from October through March 1939-40 was \$5.60 compared with \$7.55 in the corresponding period of 1938-39.

IN the past year, prices of lard have been much lower than in other recent years, and low in relation to pork prices. The low lard prices reflect not only the increase in lard production but also the increase in the total domestic production of food fats and oils. In 1939 the domestic production of food fats and oils was the largest on record. Lard production, while larger than in 1938, was smaller than the average of the 5 years before the droughts. Most of the increase in domestic fats and oils pro-

**AVERAGE PRICE OF HOGS AT CHICAGO, FEDERALLY INSPECTED
SLAUGHTER OF HOGS, AND INCOME OF INDUSTRIAL
WORKERS, UNITED STATES, 1929-40**



duction over the 1929-33 average has been in soybean oil.

Prices of hogs in the past year not only have been low compared with those of other recent years, but they also have been unusually low in relation to cattle prices. In January and February 1940, inspected hog slaughter, although much larger than a year earlier, was only 4 percent larger than the 1921-34 January-February average. Inspected cattle slaughter was about 13 percent larger than average. As compared with the January-February (1921-34) average, the 4-percent more hogs slaughtered under Federal inspection this year sold for about 35 percent lower prices, while the 13-percent larger cattle slaughter sold at 17 percent higher prices. One important reason for this change in the relation of hog prices to cattle prices is that the export demand for pork and lard is now much weaker than in the 1921-34 period. Exports of beef, on the other hand, have been small throughout the period since 1920. It

also appears that, over a period of years, consumer demand for beef in this country has strengthened as compared with the demand for pork.

EXPORTS of pork have been increased somewhat by the European War, but lard exports have not been affected much. In the 6 months following the outbreak of the European War—September 1939 through February 1940—United States exports of pork totaled 97 million pounds, about twice as much as in the same months of 1938-39. Lard exports in this period totaled 141 million pounds, about 10 percent more than a year earlier. If there had been no war, exports of both pork and lard probably would have increased some because of the large increase in domestic production. Most of the increase in pork exports was in the shipments of fresh pork to Canada, and this increase may have been due chiefly to war developments. In late February, however, Canadian imports of pork

were placed under a restrictive quota. Shipments of pork to Great Britain in recent months have not been much larger than a year earlier, and, in February, purchases of United States pork and lard were restricted by the British.

The occupation of Denmark by Germany will shut off nearly half of Britain's normal imports of cured pork. Part of this deficiency will be made up by increased Canadian shipments to Great Britain. Total pork consumption in Great Britain also may be reduced. Eventually there may be some increase in British takings of United States bacon and hams, but little increase is expected in 1940.

At the beginning of the war last September, a considerable increase in United States exports was anticipated. Hog prices rose sharply in September. As hog marketings increased seasonally after September and exports did not increase as much as had been expected, prices declined greatly. This decline continued into the late winter and early spring, even though there was a seasonal reduction in hog marketings from mid-January to early April. In early April, hog prices reached the lowest level for the season and the lowest since the summer of 1934. During the second and third weeks of April, however, prices advanced materially.

RELIEF purchases in recent months have provided some support to hog prices. During the period from December through early April the Federal Surplus Commodities Corporation purchased for relief distribution approximately 34.7 million pounds of lard and 3.8 million pounds of dry salt pork. Purchases of hams and bacon and picnics were made in mid-

April. For several months pork and lard have been listed as surplus commodities under the stamp plan. This plan, now in operation in a number of cities, is designed to increase consumption of food, particularly surplus food products, by low income groups and persons on relief.

Efforts are also being made by the Federal Government through the agricultural adjustment and conservation programs to restrict corn acreage. The supply of corn available for feeding also has been held down in the past 3 years by Government loans on corn. A report recently released on prospective plantings by farmers indicated a somewhat smaller corn acreage this year than last. If the growing season this year is about average, it is probable that the total production of corn and other feed grains in 1940 will be smaller than in 1939. Although the carry-over of old corn this year will be large, a considerable part of the carry-over will be corn sealed under Government loan. Present indications are that the total supplies of feed grains for 1940-41, excluding corn under seal, will be considerably smaller than the 1939-40 supply.

THE low hog prices in relation to corn prices in recent months and the prospective decrease in feed supplies probably will cause both the spring and fall pig crops this year to be smaller than those of 1939. This decrease will be reflected in smaller hog marketings in 1941 than in 1940. If domestic consumer demand continues near current levels or improves, the smaller hog marketings next year will be accompanied by higher hog prices than in the current year.

PRESTON RICHARDS.

Farm Real Estate Values Increase

An increase of about 1 percent in the average of farm real estate values the country over during the 12 months ended March 1, 1940, is reported by the Bureau of Agricultural Economics.

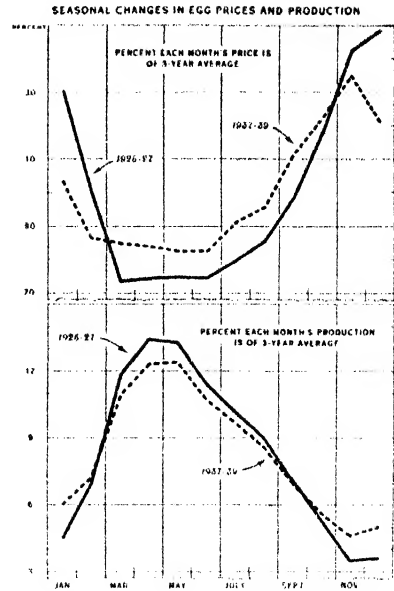
The preliminary index of average value per acre of farm real estate is 85, as compared with 84 in 1939, and with 85 in 1937 and 1938. The period 1912-14 equals 100.

New Pattern for Eggs

OF all the staple year-round farm commodities, the prices farmers receive for eggs show the greatest seasonal fluctuations. The bottom of the seasonal cycle comes during the months of March through June and the top of the cycle during October through January. Forty years or more ago the peak price was usually in January, but later it came in December. For the last several years the peak in egg prices has been in November and indications are that it may come in October, in the next few years. These peak prices in the fall and early winter were formerly quite high. In the early 1920's, farmers received nearly 50 cents a dozen, and as recently as the fall of 1930 fresh white eggs of good quality were wholesaled on the New York market for about 53 cents.

This great swing in prices from spring to fall was caused by an even greater change from season to season in the number of eggs laid per hen per month. Many small farm flocks formerly produced no eggs at all during the fall and winter, and all their eggs in the spring. During the 1920's, however, many discoveries were made in the field of poultry nutrition, and breeding, and many new methods of poultry management were developed. Poultry producers began to make use of these discoveries in order to obtain not only more eggs per hen during the year, but a greater proportion of these eggs during the high-priced months. State colleges, extension workers, feed companies, and hatcheries, for instance, have all advocated earlier hatchings, so that pullets would come into production during the high-priced months in the fall and winter instead of during the following spring. As would be expected, the increased production during these months has had an effect on farm egg prices.

THE upper part of the accompanying chart shows the extent to which



prices have been affected. The curves indicate the percent that the prices in each month are of the average prices for the 3-year periods, 1925-27 and 1937-39. In the earlier period, the price in January was 130 percent of the 1925-27 average, whereas it was only 103 percent during 1937-39. Prices formerly reached their seasonal low in March through June, whereas in the latter period May and June represent the low period. From June on a sharp rise occurs, reaching a peak in December during 1925-27, and in November during 1937-39. This illustrates the extent to which the seasonal peak price has moved forward in a relatively few years.

The lower part of the chart shows the seasonal change in the number of eggs produced per hen each month, and explains why the seasonal price curve is tending to flatten out. A greater proportion of the annual egg crop is now being produced in the months of October through February, and particularly during November, December, and January, and a significantly smaller percentage is being

produced in the spring months. Producers have made a good beginning toward stabilizing production into a year-round business instead of concentrating a major part in the spring months.

IN several ways a more stable price for eggs to the producer, and consequently to the consumer, is a change for the better. Great swings in prices from spring to fall discourage many consumers from making eggs a year-round part of their diet. This is particularly true of low-income consumers forced to omit eggs from their menus during the fall and winter. Milk, another protective food, is consumed much more regularly throughout the year because the retail price shows little or no variation from month to month, and probably the per capita consumption is higher for this reason than if prices fluctuated widely, even around the same annual average.

It might be possible, therefore, for the poultry industry to increase its total

production without being forced to accept lower average prices simply by selling eggs for a more uniform price throughout the year. Such a method of increasing consumption might be called the "hard way," since it involves many difficult production problems, such as breeding for early maturity and what is called "longevity" or the hen's ability to lay through the summer, molt quickly, and begin laying again in the fall.

Only recently we have been made increasingly aware of the marked influence of family income levels on the volume of consumption of such food items as eggs. Our annual per capita consumption of 300 eggs is the highest in the world, but our low-income groups, comprising over half our population, consume much less than this. These are the groups that would benefit the most from a levelling of the production and price curves.

C. C. WARREN,
*Agricultural Adjustment
Administration.*

United States: Exports and Imports of Specified Agricultural Commodities, March, 1939 and 1940, and September-March, 1938-39 and 1939-40¹

Commodity	Unit	March		September-March	
		1939	1940	1938-39	1939-40
Exports:					
Pork:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Cured pork ¹	Pounds.....	7,451	1,227	38,061	38,532
Other pork ²	Pounds.....	3,413	3,475	22,581	62,896
Total pork.....	Pounds.....	10,864	4,702	60,642	101,428
Lard, including neutral.....	Pounds.....	22,157	20,654	150,230	162,183
Wheat, including flour.....	Bushels.....	10,617	6,728	60,076	30,157
Apples, fresh ⁴	Bushels.....	1,192	767	10,528	2,621
Pears, fresh.....	Pounds.....	1,341	912	130,601	63,777
Tobacco, leaf.....	Pounds.....	38,215	31,752	344,875	208,426
Cotton, excluding linters (500 lb.).....	Bales.....	346	458	2,731	5,412
Imports:					
Cattle.....	Number.....	91	43	425	325
Beef, canned, including corned.....	Pounds.....	5,707	4,782	39,736	49,621
Hides and skins ⁵	Pounds.....	28,688	23,529	175,072	195,540
Barley malt.....	Pounds.....	7,669	4,865	62,220	38,334
Sugar, cane (2,000 lb.).....	Tons.....	256	276	1,222	1,778
Flaxseed.....	Bushels.....	2,031	1,972	12,157	8,423
Tobacco, leaf.....	Pounds.....	5,480	4,627	33,546	36,267
Wool, excluding free in bond for use in carpets, etc.....	Pounds.....	9,207	20,710	38,115	116,987

¹ Corrected to Apr. 25.

² Includes hams, shoulders, bacon, and sides.

³ Includes fresh, frozen, pickled, salted, and canned.

⁴ Includes baskets, boxes, and barrels, in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Source: Office of Foreign Agricultural Relations. Compiled from official records of the Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1923=100) ¹	Income of industrial workers (1924=100) ²	Cost of living (1924=100) ³	Wholesale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁶
					Prices paid by farmers for commodities used in— ⁵				
					Living	Pro-duction	Living and production		
1925.....	104	98	101	151	164	147	187	176	270
1926.....	108	102	102	146	162	146	155	179	271
1927.....	106	100	100	139	159	145	153	179	277
1928.....	111	100	99	141	160	148	155	179	279
1929.....	119	107	99	139	158	147	153	180	281
1930.....	96	88	96	123	148	140	145	167	277
1931.....	81	67	88	107	126	122	124	130	253
1932.....	64	46	79	95	108	107	107	96	219
1933.....	76	48	76	96	109	108	109	85	187
1934.....	79	61	78	109	122	125	123	95	178
1935.....	90	69	80	117	124	126	125	103	180
1936.....	105	80	81	118	122	126	124	111	182
1937.....	110	94	84	126	128	135	130	126	187
1938.....	86	73	82	115	122	124	122	124	186
1939.....	105	83	82	113	120	122	121	124	.....
1939—April.....	92	75	82	111	.....	.....	120	121	.....
.....May.....	92	75	81	111	.....	.....	120	.....	.....
.....June.....	98	80	81	110	119	121	120	.....	.....
.....July.....	101	80	81	110	.....	.....	120	126	.....
.....August.....	103	83	81	109	.....	.....	119	.....	.....
.....September.....	111	86	82	115	122	123	122	.....	.....
.....October.....	121	91	82	116	.....	.....	122	126	.....
.....November.....	124	93	82	116	.....	.....	122	.....	.....
.....December.....	128	93	82	116	121	123	122	.....	.....
1940—January.....	119	93	82	115	.....	.....	122	119	.....
.....February.....	109	89	82	115	.....	.....	122	.....	.....
.....March.....	103	87	82	114	121	.....	122	.....	.....
.....April.....	.....	.....	.....	115	.....	.....	123	124	.....

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio of prices received to prices paid	
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chick-ens and eggs		All groups
1925.....	157	177	172	153	140	153	163	150	99
1926.....	131	122	138	143	147	162	159	145	94
1927.....	128	128	144	121	140	155	144	139	91
1928.....	130	152	176	159	151	158	153	149	96
1929.....	120	144	141	149	156	157	162	146	95
1930.....	100	102	162	140	133	137	129	126	87
1931.....	63	63	98	117	92	108	100	87	70
1932.....	44	47	82	102	63	83	82	65	61
1933.....	62	64	74	105	60	82	75	70	64
1934.....	93	99	100	103	68	95	89	90	73
1935.....	103	101	91	125	118	108	117	108	86
1936.....	108	100	100	111	121	119	116	114	92
1937.....	126	95	122	123	132	124	111	121	93
1938.....	74	70	73	101	114	100	108	95	78
1939.....	72	73	77	105	110	104	94	93	77
1939—April.....	67	70	82	95	114	95	87	89	74
.....May.....	72	72	85	88	112	92	85	90	75
.....June.....	73	73	93	105	107	94	83	89	74
.....July.....	66	73	80	99	107	96	89	89	74
.....August.....	64	71	70	99	101	100	90	88	74
.....September.....	83	70	73	117	117	107	102	98	80
.....October.....	77	74	73	128	112	112	108	97	80
.....November.....	79	75	66	123	107	117	117	97	80
.....December.....	87	82	65	96	101	118	97	96	79
1940—January.....	90	85	66	117	103	119	91	99	81
.....February.....	91	85	76	168	101	118	98	101	83
.....March.....	92	85	73	128	102	114	83	97	80
.....April.....	96	85	81	145	104	110	82	98	80

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real-estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE: The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

THE AGRICULTURAL • SITUATION •

JUNE 1940

A Brief Summary of Economic Conditions

Issued Monthly by the Bureau of Agricultural Economics, United States Department of Agriculture

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LIGHTNING WARFARE struck the farm commodity markets during the past month. Prices of wheat and cotton melted all over the world; in the United States, much of the rise in the general level of farm commodity prices since the outbreak of the European War was canceled. Grain prices then were pegged and buttressed by Government loans to growers on their 1940 crops. . . . Farm income may not be very different this June than last. * * * Meanwhile, a new production and marketing season has opened rapidly the country over. Crops and pastures made quick growth following a late spring . . . truck crops are rolling to market in heavy volume . . . hog marketings are at seasonal peak . . . sheep and lambs shorn of wool that may yield producers 100 million dollars this year are going to slaughter . . . in the winter wheat belt another mechanized harvest will soon be under way . . . soon a report will come of the first bale of cotton ginned in the Deep South * * * Prospects continue for better consumer demand this summer than last.

Commodity Reviews

DEMAND: Uncertain

BEFORE the latest German invasion, conditions pointed definitely to improvement in the domestic consumer demand for farm products. The industrial recession apparently had ended in April. With steel production advancing, residential building making a good showing, exports of industrial products substantially above last year, and goods moving into consuming channels at a comparatively high rate, a gradual upswing of business activity and consumers' income was in prospect.

Then came the blitzkrieg. If this proves to be only temporarily successful, leading to increased activity on a broader war front, the effects on the industrial situation in the United States probably will be stimulating. Increased export of many kinds of war supplies will follow, with effects similar to increased Government spending by this country. With increased exports and large domestic preparedness expenditures, the gradual increase of industrial activity previously indicated may turn out to be even greater as a result of the war developments.

On the other hand, should the German invasion be so successful as to bring about a quick termination of the war, the effects on domestic business activity probably would be adverse. Exports of industrial goods would decline. Inventories of such products have been built up in fear of war-time price increases, and if the war ended businessmen probably would choose to use part of their stocks rather than to continue current purchases. This might lead to reduced production, employment, and consumers' income. Partly or wholly offsetting this influence, however, would be the increased preparedness expenditures of this country should the war end in this way. Orders for airplanes and other

supplies now being made for the Allies would at least to some extent be replaced by orders from our own Government, since we do not have sufficient capacity for many of these products to satisfy both demands.

F. L. THOMSEN.

EXPORTS: Shrunk

Prior to the recent war developments export markets for many of our farm products already had been lost or greatly diminished. Almost the only important exception was cotton, but even for this commodity the outlook for next season was definitely bad. This loss of our export markets was due largely to two developments: (1) Restrictions on imports and consumption by the Allies in order to conserve their dollar exchange for the purchase of industrial goods and for other purposes, and (2) the shutting off of neutral markets by invasion.

The recent developments have cut us off from several European nations which were important markets for fruit, feed, and other United States farm products. On the other hand, these countries previously had supplied considerable quantities of pork, dairy, and poultry products to Great Britain. The United States eventually may obtain a part of this market. Consideration must be given, however, the fact that Britain can make up for at least a part of the loss in imports by consuming less, by increasing consumption of substitute products, and by increasing imports from Canada and countries other than the United States.—F. L. T.

EMPLOYMENT: Increase

Now is the seasonal peak of farm employment, with approximately 3,000,000 hired hands on farmers' pay rolls. The season began with farm wage rates the highest in nearly

10 years, but wages may have been pared since then in view of the sharp declines in farm commodity prices last month.

The number of hired workers usually declines through July, then increases through September and early October. Employment then decreases sharply—by approximately 1,000,000 hired hands—through December. Farm employment is larger than it was 5 years ago, but as an annual average approximately 300,000 fewer hired workers are engaged now as compared with 10 years ago.

Cash farm wages totaled 550 million dollars in 1939. This compares with 393 million in 1934, and with 955 million in 1929. The total now is about the same as it was in 1910-14. The peak during the last 30 years was 1,099 million dollars in 1919.

PRICES: Break

The Government index of prices of farm products was reported as unchanged during the month ended May 15, but this did not reflect all of the sharp decline that followed the swift

thrust of Germany through the low countries. Wheat at Chicago dropped 30 cents a bushel. Declines in prices of wheat, corn, cotton, lard, and other products probably canceled much of the rise in the general index of farm

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power per unit of farm products ¹
1939			
January.....	94	120	78
February.....	92	120	77
March.....	91	120	76
April.....	89	120	74
May.....	90	120	75
June.....	89	120	74
July.....	89	120	74
August.....	88	119	74
September.....	98	122	80
October.....	97	122	80
November.....	97	122	80
December.....	96	122	79
1940			
January.....	99	122	81
February.....	101	122	83
March.....	97	122	80
April.....	98	123	81
May.....	98	123	80

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by producers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	May average, 1910-14	May 1939	April 1940	May 1940	Parity price May 1940
Cotton, lb.....	cents.. 12.4	12.7	8.48	10.03	9.79	15.87
Corn, bu.....	do. 64.2	66.2	48.3	58.6	63.4	82.2
Wheat, bu.....	do. 88.4	90.3	63.0	88.9	80.7	113.2
Hay, ton.....	dollars. 11.87	12.28	6.68	8.20	8.32	15.19
Potatoes, bu.....	cents. 69.7	69.5	¹ 64.4	83.8	83.5	87.6
Oats, bu.....	do. 39.9	41.5	29.5	38.8	36.6	51.1
Soybeans, bu.....	dollars. (2)	(2)	.87	1.00	.96	—
Peanuts, lb.....	cents. 4.8	4.9	3.2	3.53	3.66	6.1
Beef cattle, cwt.....	dollars. 5.21	5.50	7.09	7.16	7.35	10.67
Hogs, cwt.....	do. 7.22	7.23	6.39	4.90	5.35	9.24
Chickens, lb.....	cents. 11.4	11.8	13.9	12.9	13.6	14.6
Eggs, doz.....	do. 21.5	16.6	15.2	15.0	15.1	² 21.3
Butterfat, lb.....	do. 26.3	24.0	21.5	27.5	26.9	³ 32.4
Wool, lb.....	do. 18.3	17.8	21.0	26.1	27.6	23.4
Veal calves, cwt.....	dollars. 6.75	6.69	8.26	8.63	8.91	8.64
Lambs, cwt.....	do. 5.87	6.46	8.02	8.14	8.25	7.51
Horses, each.....	do. 136.60	139.20	82.50	76.60	76.10	174.80

¹ Revised.

² Prices not available.

³ Adjusted for seasonality.

products prices at the outbreak of war last September.

May 15 indices for grain, cotton and cottonseed, truck crops, and dairy products were lower than on April 15; indices for fruit, meat animals, and chickens and eggs were higher. Indices for all groups except meat animals, and chickens and eggs were higher than on May 15 last year.

INCOME: Increase

Income from marketings in May probably was not seriously affected by the sharp declines in prices of grains and cotton. Marketings of these products are relatively small in May. Marketings of grains do not become heavy until June, and of cotton until August. Income from fruits is seasonally increased from June through November. The annual peak of income from all commodities combined is in October.

Farmers' cash income from marketings and Government payments in the first 4 months of this year was 274 million dollars more than in the like period of 1939. The total was 2,615 million dollars compared with 2,341 million in 1939. All major groups of commodities except fruits, vegetables, and poultry and eggs yielded larger income. Government payments were larger.

The following table shows income for April and cumulative totals for January-April, with comparisons:

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
April:			
1940.....	559	66	625
1939.....	478	90	568
1938.....	482	60	542
January-April:			
1940.....	2,258	357	2,615
1939.....	2,059	282	2,341
1938.....	2,118	168	2,286

WHEAT: New Crop

A new winter wheat harvest will soon be under way. The crop was officially indicated in May at 460 million bushels. Growing conditions improved during the month, and it now appears that the total supply of wheat for 1940-41—including winter and spring wheat and the July 1 carry-over—will be only a little smaller than in 1939-40. The total supply for 1939-40 was 1,009 million bushels.

The wheat crop in other parts of the world has not been doing so well this season, and the world crop is likely to be smaller this year than last. It may be smaller than world consumption. This means that the world carry-over of wheat a year hence may be smaller than on July 1, 1940.

Prices of wheat broke sharply the world over last month following the swift invasion of Belgium and France. Prices in the United States declined somewhat more than at Winnipeg and Buenos Aires, but continued high in comparison with prices abroad. The decline was checked when futures were pegged at minimum levels on the grain exchanges and prices were buttressed by offers of Government loans on the 1940 crop basis 81 cents, No. 2 Hard Winter at Chicago. Farmers cooperating in conservation programs will also receive adjustment and parity payments.

AAA announced there would be no marketing quota for wheat this year since the total supply is below the marketing quota level of 1,023 million bushels. Announcement was made also of a 1941 national wheat acreage allotment of 62 million acres.

COTTON: Lower Priced

Cotton growers watching the swift turn of domestic and foreign events find little of encouragement in their situation. It is true that the world carry-over of American cotton has been reduced by approximately 1 million bales this season, but factors

on the demand side are less favorable than they were a few months ago.

Domestic cotton-mill activity has declined sharply since last December. It may decline more than seasonally in the next few months unless sales by manufacturers should increase. The foreign situation has been worsened by the invasion of Belgium and Holland, where approximately 600,000 bales of cotton were consumed annually during the last 4 years.

Added to the difficulties on the continent, is the recent loss of the important manufacturing area of Northern France as a market for exports, and the possibility of losing the Italian and other Mediterranean markets. The Italian mills alone consumed about 700,000 bales of cotton in each of the last 2 years.

The combining of all these factors put cotton prices down in mid-May to lowest figures since early December. The 10-market average for Middling 15/16 was 10.18 cents during the week ended June 1, as compared with the December peak of 11.28 cents, and with 9.66 cents during the last week of May in 1939

FEED: Price Ratio

The relation between feed prices and livestock prices continues unfavorable to livestock producers. The effect may well be to reverse the upward trend in livestock numbers and production of livestock products. Meanwhile, the 1940 feed crops are well along, growing conditions having improved following the late spring. The corn crop probably will be smaller this year than last, but a high record carry-over of old corn is in prospect.

Feed grains continue to sell for higher prices this year than last, despite the declines following the extension of the war through the low countries. Except for subsidized exports, the European market for United States corn has been prac-

tically shut off for the time being. An important factor supporting prices is the United States Government corn loan. On May 20 a lower limit of 59 cents per bushel was placed on July corn futures.

An analysis by BAE shows that prices of hogs and eggs relative to feed prices in May were much below the average for that month in the 10 years 1929-38, that the price of butter was somewhat below the average, that the price of beef cattle was slightly below.

CATTLE: Little Change

It appears now that total cattle slaughter will be about the same this year as last. Marketings of fed cattle are likely to continue larger during the remainder of 1940 as compared with 1939, but marketings of other cattle—mostly of breeding stock—will be smaller. Slaughter supplies of well-finished, long fed cattle will increase seasonally during the early summer, and of cows and heifers during the summer and fall.

Prices of the better grades of slaughter cattle usually decline during the winter and spring. This year, through late May, the prices of such cattle held steady to slightly higher. How long this can continue is doubtful in view of the relatively large marketings of fed cattle in prospect during the next few months. On the favorable side—for cattle as for hogs—will be the stronger consumer demand for meats this summer than last.

BAE says that the demand for feeder cattle may not be as strong this fall as last, since smaller feed supplies and higher feed prices are in prospect. Prices of feeder steers have risen rather sharply since late winter, and in mid-May averaged a little higher than at the same time last year. Prices at Kansas City averaged \$9.45 for the week ended May 17, compared with \$9.20 in the corresponding week of 1939.

HOGS: Heavy Marketings

Hog marketings should decline during the remainder of the summer. Total volume from May to September will be larger than in the same period a year ago, but the increase may be a little less than in the first 7 months of the current hog-marketing year. Prospects also appear favorable for a better consumer demand this summer than last.

Fewer pigs probably were produced this spring than last. Feed is plentiful, but it is higher priced in relation to the price of hogs. Continuation of this unfavorable price ratio may result in the marketing of a relatively large proportion of the spring pig crop in late summer and fall. A smaller crop of pigs this fall than last also is in prospect.

Immediately unfavorable for exports of pork and lard is the recent turn of events in the foreign political situation. Exports of pork may increase later in the year when British supplies of meats run low. Meanwhile, the export market is practically nonexistent. No immediate increase in British purchases of United States pork is likely.

British imports of bacon from Canada and of beef from South America have increased since the beginning of the war, and meat production in Great Britain has been stepped up as a result of the heavy slaughter occasioned by reduced imports of feed. Late this year or early next, British meat production will be curtailed. This may lead to a moderate increase over last year in United States exports of pork in 1941.

Little or no increase in British takings of American lard is in prospect this year, and possibly next. Great Britain appears to have large stocks of fats and oils and can obtain imports of vegetable and marine oils to better advantage than imports of lard from the United States.

LAMBS: Round-Up

Prospects are for larger marketings of sheep and lambs in late spring and early summer this year than last. Basis is the larger proportion of early lambs in slaughter condition, and indications of a heavy movement of grass fat yearlings from Texas. Supplies for slaughter may continue relatively large in late summer and early fall, since late lambs in the Western States are in good condition.

A round-up of the situation indicates that California shipments were much larger this May than last and included fewer feeder lambs, that Texas shipments of fat sheep and lambs would be much heavier this June than last, and that the market movement of lambs from the Northwest will be earlier than usual this year. In contrast, the shipments from the Southeast will be late. Lambs have not done well in the Southeast this season.

Total slaughter supplies of sheep and lambs were about the same in the first 4 months of this year as compared with 1939 . . . Prices have been supported by a stronger demand for meats and wool . . . The number of stock sheep on farms and ranches on January 1 last was the largest for that date in recent years.

WOOL: New Clip

Much of the 1940 wool clip has been marketed at prices about 30 percent higher than in the spring of 1939. The 1940 clip likely will net farmers the largest cash income since 1937. It may yield around 100 million dollars, as compared with 84 million in 1939, and with 71 million in 1938. The 117 million dollars in 1937 was the largest cash income since 1919.

Government specialists see a favorable price outlook for wool the remainder of this season, even though domestic mill consumption should be smaller in 1940 than in 1939. Stocks of raw wool were unusually small at the beginning of the season, and it was

expected that dealers would buy considerable quantities of new clip wool to replenish inventories. Imports of wool have declined in competition with the new domestic clip, but may increase again later in the season.

News from abroad includes reports of a small carry-over of good-quality wools in the Southern Hemisphere, other than the stocks held by the United Kingdom in Australia and New Zealand. Sales of Australian wool to neutral countries have been relatively small. The United Kingdom is making every effort to increase export trade in manufactured products rather than in raw materials. Little New Zealand wool is available for export, most of the supply being used for military purposes.

POTATOES: Increase

Marketmen are looking for bigger supplies of new potatoes this June and early July than last. But the BAE reports that these increased quantities probably will be offset to some extent by smaller supplies of old stock. Also, by way of indicating the level of prices, the Government economists say that consumer purchasing power is slightly higher than at this time last year.

The potato crop in the second section of early States is about 5 percent larger this year than last. But a slight reduction in output in the second early States has been reported. A slight increase in the intermediate crop as contrasted with the unusually short crop produced last season has been indicated.

Reason for the increase in marketings this month is that yields of early potatoes in the Southern States have turned out much higher than had been expected. Also, because of the lateness of the season the marketings in some areas were behind schedule, resulting in some concentration of shipments this month.

Prices of new crop potatoes declined seasonally in May, whereas

prices of old stock advanced. Average to farmers was about 30 percent higher than in May last year.

TRUCK CROPS: Progress

Spring truck crops made good growth in May, and the acreage that had been planted for market in June and July was only slightly below that of last year. However, a smaller market supply was in prospect for this month. A favorable price situation was indicated, unless there should be some concentration in marketings.

In contrast, indications in late May pointed to larger crops this year than last, of asparagus, second early carrots, intermediate lettuce, intermediate green peas, second early spinach, second early tomatoes, and early watermelons. An increase of 16 percent in acreage planted or to be planted to truck crops for processing this season was indicated.

Prices declined in May as supplies of truck crops increased seasonally. Only advances were in prices of celery, red cabbage, topped carrots, onions, some varieties of peppers, radishes, spinach, yellow squash, and turnips. Prices of truck crops usually decline from early spring to late summer.

SUGAR: Near Record

The world supply of sugar for the 1939-40 marketing year is indicated at 39.1 million tons. This is the second largest supply on record, having been exceeded only by the 1936-37 total. An increase of 1.7 million tons in world production in 1939-40 more than offset a decrease of 1 million tons in carry-over stocks in 25 important countries. World production in the current season was 34.8 million short tons, raw value—the third largest on record. Most of the increase in production this year was in the principal importing countries.

Early reports from many of the importing countries of Europe indicate

substantial increases in plantings of sugar beets in prospect in 1940. Much of this increase is attributed to disruptions to international trade occasioned by the European War and a tendency for many of these countries to become self-sufficient in sugar production. These increases are likely to cause a further contraction of the export market for cane sugar produced in the southern hemisphere countries.

Production of sugar in areas usually supplying most of the cane and beet sugar consumed in the United States is indicated as being slightly larger in 1939-40 than in the preceding season. Most of this production will be available for marketing under the Government quotas announced for the calendar year 1940. Raw sugar prices, duty paid, in the United States, rose sharply following the outbreak of the European War, but have since declined. Prices in March were about the same as in that month last year.

FRUITS: Smaller Supply

Total supply of fruits probably will be smaller this year than last. It is likely that larger crops of California summer oranges, lemons, and dried prunes will be more than offset by smaller crops of other fruits. The peach crop in California, and in the Southern and North Central States, will be substantially smaller this year. The output of apples, pears, grapes, and plums in California probably will be less.

MILK: Peak Production

A high record of milk production is expected this summer. The annual peak of production usually is in June, followed by sharp declines through November. Basis for this summer's forecast is the larger number of cows on farms this year compared with last, and the prospect for improved consumer demand for dairy products. BAE expects prices of manufactured dairy products will continue higher this summer than last.

United States exports of dairy products—especially of concentrated milks—may increase as a result of the occupation of Denmark and the invasion of The Netherlands by Germany. This would be a strengthening factor in the dairy situation, but a minor one as compared with factors in the domestic market. The important thing is the domestic demand for milk and dairy products.

Production of manufactured dairy products has increased seasonally. A rather good consumer demand is in prospect, and a good storage demand. Commercial stocks of butter in storage were somewhat smaller this May 1 than last, stocks of cheese were slightly larger, and manufacturers, stocks of evaporated milk were about 54 percent larger. Storage stocks are mounting rapidly now.

Farmers are getting higher prices for all classes of milk this season as compared with a year ago, but costs of production also have been higher. The milk cows through early May were getting only about a third of their feed from pasture, and the remainder from relatively high-priced grain and concentrates.

EGGS: Production Down

Production of eggs is declining seasonally, and improvement in prices may be registered soon. Prospect is that production in the last half of 1940 will be smaller than in the like period of 1939, and that prices will average higher during this period. Much depends, of course, upon the maintenance of a good level of consumer buying power.

Farm prices of chickens tend to decline during the last half of the year, but prices may average higher this year than last. The 1940 hatch is smaller than that of 1939, stocks of storage poultry—except turkeys—are smaller than at this time a year ago, and consumer income is somewhat higher.

FRANK GEORGE.

This Changing Agricultural World

II: Fresh Fruit

IMPORTANT changes have occurred in world production and consumption of fresh fruits in the last 20 years. Outstanding have been the increased production of oranges and grapefruit in the United States, Palestine, and Brazil; of apples in Canada and Australia, and pears in the United States and Argentina. On the basis of the age distribution of present plantings, these upward trends in production are likely to continue during the next few years. World consumption of fruits also has increased, notably in the United States and Canada, and in European countries where consumer demand has been stimulated by "Eat More Fruit" campaigns.

Until comparatively recently the various countries which have increased their surplus production of fresh fruits have shared in the expanding world markets, but in varying degree. United States exports had increased in total and as a proportion of the world trade in fruits during the decade of the 1920's. The upward trend in United States exports of pears and oranges was continued during the decade of the 1930's, exports of grapefruit leveled off during this period, and the trend of exports of apples declined hampered by increasing foreign trade restrictions and competition from other surplus-producing areas.

WORLD production of apples has expanded slightly since the World War. During the past decade, the crop averaged about 420 million bushels, with the United States accounting for more than one-third the total. The trend in American production has been slightly downward during this period. Production in several other exporting areas, notably Canada and Australia, has been sharply upward. Production in

Recent political events in Europe have darkened the immediate outlook for United States exports of fresh fruits. Exports of apples and pears were sharply curtailed last season, and citrus exports to Europe since the outbreak of war have been negligible. Prospects for exports from this year's crops are no better, since virtually the whole of Europe has been eliminated as a possible export market during the coming season. It seems practically certain that except for shipments of citrus fruits to Canada the United States producers of fresh fruits must depend almost entirely upon the domestic market. The accompanying article discusses some of the principal developments in world production, consumption, and trade in fresh fruits during the last 20 years in an effort to see how these and current happenings may affect our export markets in coming years.—Ed.

France and Germany—the second and third most important producers—has shown little change.

World exports of apples increased substantially during the 1920's, and averaged 34 million bushels during the period 1929-33. Since then, the trend has been downward. Exports from the United States increased during the 1920's, but then declined. The decline in United States exports has in fact exceeded the decline in world exports of apples. Shipments from the United States averaged nearly 16 million bushels or 46 percent of total world exports between 1929-33, compared with 9.5 million bushels or 36 percent in the 3 years, 1935-37. The British imperial preference, initiated in 1932, enabled Canada to replace the United States as the principal supplier to

Great Britain. The preference on Canadian apples was reduced in the Anglo-American trade agreement of January 1, 1939, but little of the expected benefits have been realized since Great Britain put a wartime embargo on imports of American apples last November. The German foreign trade policy since 1933 has also sharply curtailed purchases of our apples. On the other hand, exports from Canada, Australia, and Italy have increased substantially during the past decade.

WORLD production of pears has been upward. During 1936-37 and 1937-38 production averaged 133 million bushels or 20 percent above the average for the 5 years 1926-27 to 1930-31. (World estimates prior to 1926 are not available.) The United States, France, and Germany produce the bulk of the world crop. Production of table pears has expanded rapidly outside Europe, especially in the United States, Argentina, Australia, and South Africa, but European production—a large portion of which consists of cider pears—has increased only slightly.

During the past 20 years, world exports of pears ranged between 6 and 6½ million bushels a year. Significant changes, however, took place in the relative importance of exporting countries. Prior to 1930, Belgium was the principal exporting country but, since then, the United States has led the world in volume of pears moving into international trade. American exports have expanded rapidly, amounting to 2.7 million bushels or 42 percent of world exports in the 1937-38 season compared with an average of 1.6 million or 27 percent of the world total during the 5 years, 1926-27 to 1930-31. American exports reached a record high of 3.4 million bushels in 1938-39. Exports of pears from Argentina, Italy, Australia, and South Africa also increased substantially.

The rapid increase in shipments from non-European surplus producing

countries has been largely at the expense of exports from European surplus pear areas. During the late 1920's, European surplus-producing regions provided about 62 percent of world exports, while non-European exporting countries supplied nearly 74 percent of the world total during the 1937-38 season. Pears produced in the newer commercial fruit regions outside Europe are superior in quality and in pack to the bulk of the pears grown in Europe. As a result, even European surplus-producing countries, such as Belgium and France, have been importing increasing quantities of non-European pears in recent years.

Pears produced in the commercial producing sections outside Europe, however, have displaced European-grown pears only in those importing countries which have followed relatively liberal foreign trade policies. For example, the non-European exporting countries—the United States, Argentina, Australia, and South Africa—have supplied the bulk of imports into the western and northern European countries in recent years. The central European importing countries, on the other hand, drew practically their entire supply from Italy, Switzerland, and Czechoslovakia, for stringent exchange and import controls have excluded pears from the surplus-producing countries outside Europe. Because of these restrictions, imports of pears into central Europe, and especially into Germany, declined sharply during the 1930's, while somewhat heavier quantities were imported by the countries of western and northern Europe during this period.

WORLD production of oranges has increased from 133 million to over 200 million boxes over the past 20 years. Most of this increase has occurred in the United States, Brazil, Palestine, and Italy. The United States, Spain, and Brazil supplied more than half the world crop during the last 10 years.

Spain dominated the international trade in winter oranges up to the outbreak of the Spanish War in 1936, supplying between 60 and 70 percent of the total exports. Winter shipments from Palestine, however, have increased almost fivefold above the average movement during the 1926-29 period. Exports of summer oranges also have expanded substantially, especially from Brazil, South Africa, and the State of California. Prior to the outbreak of the current war, the United Kingdom, Germany, and France took about 70 percent of the world imports.

Since 1920, the United States orange crop has expanded from about 32 million boxes to 75 million. Exports have risen from an average of 1.7 million boxes between 1920-25 to 5.2 million during the past five seasons. The larger portion of our shipments usually move to Canada, and this trade has been expanding. Heavier competitive supplies, however, have adversely affected American exports to Europe. As a result of reduced Spanish offerings, United States winter exports during the past two seasons have been heavy, but our winter shipments to Europe are expected to be reduced when Spanish supplies return to normal. Shipments of California Valencias are also faced with increased competition during the summer season from Brazil and South Africa.

WORLD production of grapefruit increased almost fourfold during the past 20 years, chiefly because of the rapid expansion in United States production. Although between 85 and 90 percent of the world crop in recent years has been produced in this country, Palestine is the most important exporter. American exports have averaged around 1 million boxes during the past 10 years, while shipments from Palestine rose from 106,000 boxes to over 2 million boxes during this period.

The United Kingdom and Canada take the bulk of world exports of grapefruit, since the fruit is not consumed on any large scale in continental European countries. American shipments to the United Kingdom have been restricted by increasing supplies of Palestine fruit during the winter and from South Africa and Brazil during the summer season. Our exports to Canada, on the other hand, have shown a rapid upward trend.

The United States formerly received large quantities of grapefruit from Puerto Rico. Shipments increased during the 1920's to a peak of almost 1 million boxes in 1929. Since that time, Puerto Rican shipments have declined sharply, chiefly because of heavier domestic production of the fruit. Imports from Cuba have also fallen off during the past 15 years.

WORLD production of lemons reached a peak of 27.5 million boxes in 1932-33, and Italy accounted for 65 percent of the world crop. Since that time, disease damage has reduced the Italian crop and world production has declined. In 1937, the United States became the world's leading producer.

Italy continues, nevertheless, to provide the bulk of world exports. Italian exports have ranged between 6 and 8 million boxes during the past 15 years, except for 1936 when shipments fell to 5 million boxes because of the application of economic sanctions by the League of Nations. This has represented between 80 and 90 percent of world exports.

The United States was a net importer of lemons up to 1929-30, taking an average of over 1 million boxes between 1921-22 and 1929-30. Since that time, this country has been a net exporter of the fruit. This shift resulted from heavier domestic production and from the sharp decrease in imports following the higher tariff of 1930. American exports, particularly to Canada, have been upward during the past decade.

THE big problem that confronts American growers and exporters of fresh fruits is the possible after-effects of the European war upon the foreign demand for our produce. European countries have introduced stringent wartime controls over the importation of fruits, and these restrictions are not likely to be completely removed for some time after the end of the war. These controls have been used to curtail imports of American fruit. Con-

tinuation of these restrictions will mean that American fresh fruit exports to Europe are not likely to return for a number of years to the levels reached prior to the outbreak of the war. Increased competition from other fruit-exporting countries is another unfavorable factor in the long-time outlook.

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Case Record of Farm Income

APPROXIMATELY 50,000 farmers in Ohio, Indiana, Illinois, and Michigan kept farm account books in cooperation with the State agricultural extension services during the 10 years 1929-38. A summarization of data contained in these books, made by the Bureau of Agricultural Economics, indicates how these farmers fared as to farm receipts, farm expenses, and farm income during a period commonly regarded as probably the most critical in American agriculture.

The year of lowest receipts and farm incomes was 1932, but farm expenses did not reach the lowest point until 1933. Following 1932, increases occurred in farm receipts and farm incomes. Farm expenses increased from 1933 through 1936, the year of highest farm income since 1929. But in 1937 and in 1938, when farm receipts were somewhat less and farm expenses somewhat more than in 1936, farm incomes dropped back to a little less than the 1934 and 1935 figures.

THE farm account book records are from every type-of-farming area within each State. All the more common types of farming within the boundaries of the four States, together with many types of less frequent occurrence, are represented. The farms average 185 acres in size with almost 150 acres of tillable land, and about 110 acres in crops other than pasture. The larger

crop acreages during the period covered were in corn, the small grains, and hay, but on many farms such crops as fruits, vegetables, potatoes, sugar beets, or dry beans were produced for sale.

The major part of the income for many of the farms was from the sale of one or more crops, while for many others it was from sales of dairy products, hogs, cattle, poultry and and eggs, sheep and wool, or a combination of two or more of these items. A large majority of the farmers repre-

Average Farm Receipts, Farm Expenses, and Farm Incomes From Farm Account Book Records in Ohio, Indiana, Illinois, and Michigan, 1929-1938

Year	Farms included	Farm receipts per farm	Farm expenses per farm	Farm income per farm
	<i>Number</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
1929.....	3,626	4,621	2,134	2,487
1930.....	5,024	3,243	2,114	1,129
1931.....	5,367	2,013	1,795	218
1932.....	4,306	1,582	1,410	172
1933.....	3,572	2,578	1,211	1,367
1934.....	4,098	3,210	1,338	1,872
1935.....	4,910	3,346	1,384	1,962
1936.....	4,979	3,976	1,511	2,465
1937.....	5,407	3,573	1,767	1,806
1938.....	6,164	3,506	1,730	1,767

NOTE.—The terms "farm receipts" and "farm expenses" as used in this table are essentially in accord with their general use in farm business analysis studies. The term "farm income" refers to the difference between farm receipts and farm expenses. It represents the amount available to the farm operator for his labor and management, as well as return on the investment in the farm business. Payment of interest on debts must come out of this income.

sented by the reports cooperated in the agricultural adjustment programs. Income included Government payments on this account. Farmers reporting this item separately averaged a little better than \$200 in Government payments in 1938.

A FEW facts from data in the account books reveal some of the changes which have been made toward the goals contemplated by the agricultural conservation programs. In Indiana, the farmers increased the number of acres of tillable land in legume sod, from 34 acres per farm in 1931 and 1932 to 43 acres in 1938. In Illinois, 70 percent of the tillable land on the account farms had been in corn and small grains in 1931 and 1932,

as contrasted with 64 percent in 1938. The shifted acreage had been planted to hay and pasture. In Michigan, the 1931-32 acreage in legume crops was 25 percent of the tillable land, as contrasted with 31 percent in 1938.

It is believed that the types of farming followed within the four States are fairly represented by these account book farms, but data from the accounting farms should not be used to represent averages for the States named. These farms are larger than State averages. Crop yields and efficiency in livestock production were, in the main, above average. Incomes doubtless were higher than the average for all farms in the four States.

HARVEY W. HAWTHORNE.

Toward Farm Security

GOVERNMENT loans and grants have been made to more than 1,000,000 low-income farm families under rural rehabilitation and relief programs of the Farm Security Administration. Rehabilitation loans to 559,000 families totaled \$376,476,000 during the 5 years ended April 30 last, grants to some of these borrowers and to an additional 546,000 families amounted to \$112,531,000 during this period, and tenant purchase loans to 7,000 families aggregated \$41,873,000.

A Government survey made in 1935-36 had revealed that approximately 1,650,000 farm families had gross incomes of less than \$500 a year. Practically all of these families needed help in managing their farms. They lacked tools, livestock, and education in sound farming practices. They needed both money and guidance. To help meet these needs the program of the Farm Security Administration was created, and the major emphasis placed upon supervised loans.

AVERAGING \$350 to \$800, rehabilitation loans are made to

needy farm families the country over to buy the cultivators, mules, and other equipment needed to carry on farm work. The rehabilitation loans are made for a period of 1 to 5 years and carry an interest rate of 5 percent. To be eligible for such a loan a farmer must either own or be able to lease enough land to provide his family an adequate living under normal conditions. He must be unable to obtain a loan from any private credit agency. Security is based upon the farmer's character and upon the use of sound farm practices as outlined in a "farm-and-home plan."

This "farm-and-home plan" prepared jointly by the farm family and the local FSA farm-and-home supervisors, provides for the home production of most of the family's food supply and feed for their livestock. It includes the production of two or more farm products for sale. All income and expenses are estimated, and farm methods that will conserve the soil must be adopted. The amount of the loan is based on the livestock and equipment needed to put the plan in action. After the

loan is made the Farm Security farm-and-home supervisors continue to work with each family throughout the farming season, supplying practical information on modern farming methods.

A recent survey showed that farm families aided by rehabilitation loans and guidance have increased their net worth—the value of their possessions minus their debts—by an average of \$230 or 26 percent. These families in the aggregate have added to the wealth of their communities a total of nearly 83 million dollars. Moreover, while much of the money loaned has not yet fallen due, to date more than 128 million dollars has been repaid and returned to the United States Treasury. It is estimated that eventually at least 80 percent of the loans will be repaid. Loans outstanding as of April 30 last totaled approximately 256 million dollars.

IN a limited number of cases the Farm Security Administration also makes loans large enough to purchase a family-size farm. These are the tenant purchase loans which are made only to tenants, sharecroppers, and farm laborers. They extend for a period of 40 years, carrying a 3 percent interest rate and, as in the case of the short-term loans, must be accompanied by a sound "farm-and-home plan." Funds provided for tenant loans are allocated among the States on the basis of farm population and the prevalence of tenancy. A committee of local farmers selects the families who are to receive the loans and approves the farms to be purchased. More than 133,000 applications were received for the approximately 7,000 loans being made during the current fiscal year.

Tenant purchase loans are made in an effort to check the increasing rate of farm tenancy. More than 4 out of every 10 of the Nation's farm families are tenants and the total number of tenants is increasing at the rate of

about 40,000 a year. Many farm families who have obtained a new start under the rehabilitation program are able to continue their progress with the aid of a tenant purchase loan.

June 30, 1940, will mark the end of the third year of the tenant purchase program. By that date it is estimated that approximately 13,000 loans will have been made in 1,300 counties. During the first 2 years of the tenant purchase program the loans averaged \$5,400 which covered both the cost of the farm and the repairs needed to place the farm buildings in good condition. Repayments have exceeded expectations. Although only \$92,544 fell due at the end of the first year of operation, the borrowers repaid \$152,779 or 165 percent of maturities. Preliminary reports on the second year's collections indicate a continued high repayment record.

SEVERAL supplemental programs have been developed. Farm Security helps farm families who have accumulated a top-heavy debt load to get these debts adjusted to a point within their ability to pay. Tenant farmers are aided in obtaining long-term written leases that state clearly what is expected of both landlord and tenant. In an effort to improve their health, the Farm Security Administration has helped low-income farmers to form group medical associations. In many cases the low-income farmers have been helped to form cooperatives for the purchase of heavy farming equipment, purebred breeding stock, canning equipment, and veterinarian services. Fertilizer, seed, and other farm supplies are bought in large quantities at considerable savings.

More than \$112,500,000 has been distributed as relief grants to farm families in areas stricken by drought and other catastrophes to enable these families to purchase needed food and clothing. A large portion of this money has been spent in the Great Plains States where the weather has been exceptionally dry in recent years.

Many grants were made in the flood areas in 1936 and in the Southern States where the fruit and truck crops were hard hit by heavy frost in the winter of 1939-40. Grants have been made to many rehabilitation loan borrowers and to an additional 546,000 farm families.

THE 164 homestead developments, or "resettlement communities" as they are sometimes called, make up much of the remainder of the Farm Security Administration program. These projects were started by the Federal Emergency Relief Administration, the Subsistence Homestead Division of the Department of the Interior, and the Resettlement Administration. Most of these developments, varying widely in type, were designed to give low-income farm families a chance to make a better living under modern farming conditions. There are 15,700 families in these communities. New farm houses have been built, modern farming methods have been introduced, and on more than a third of the projects cooperative enterprises have been developed. At approximately two-thirds of the projects the homesteads are grouped in the form of a community and the remainder are formed by scattered or small groups of farms. On most of the developments the families lease their homesteads for a trial period before purchasing. As of March 31 last a total of \$158,511,000 had been spent in project development. A critical appraisal of these resettlement projects is now being made by the Bureau of Agricultural Economics.

THE plight of the agricultural migrant unable to find work is of major concern to the Farm Security Administration. Drought, mechanization of farms, rapidly increasing farm population, and many other factors have forced hundreds of thousands of farm families off the land. Today these families are wandering

from State to State, obtaining part-time work in the harvest, earning from \$250 to \$400 a year. To provide temporary shelter for a portion of these families the Farm Security Administration has built or has under construction 25 permanent and 6 mobile camps. These camps are composed mainly of tent platforms or one-room shelters, and sanitary facilities. The 31 camps are located in 7 States—15 in California, 2 in Washington, 2 in Oregon, 3 in Idaho, 3 in Arizona, 4 in Texas, and 2 in Florida. A total of \$7,415,000 has been spent for the development of these camps which provide shelter for 7,000 families at any one time and may be used by from 12,000 to 15,000 families in 1 year.

While these camps offer only the barest minimum of decent living facilities they provide far better shelter and sanitary arrangements than most of the migrants could otherwise obtain and they have done much to relieve suffering and check the spread of disease. The camps do not pretend to provide good housing nor can they be considered a permanent solution for the migrant problem.

The main efforts of the Farm Security Administration in its attack upon the migrant farm labor problem have dealt with the checking of migration at its source. For every dollar which the Farm Security Administration has used to aid migrants in California, for example, it has used 20 dollars for the rehabilitation of needy farm families in the five States from which most of the Pacific coast migrants originally came—Oklahoma, Texas, Kansas, Arkansas, and Missouri. In the same way throughout the Nation, the main emphasis of the Farm Security Administration's program is to help low-income farmers keep their foothold on the land.

PHILIP BROWN,

Farm Security Administration.

Turpentine—An Old Southern Industry

GUM spirits turpentine from April 1 to 9, 1920, sold on the Savannah, Ga., market—major trading center for the naval stores industry—at \$2.33 a gallon, or \$116.50 a 50-gallon cask—an all-time high. During the corresponding 9 days of this year 1940, the same commodity brought 29½ to 30¼ cents a gallon, or on the average \$14.94 a cask—less than 10 points above the record low of 19¼ cents a gallon in September 1938. This decline, which represents a general drop in the price level of the principal products of the oldest industry in the United States, had of course its daily and seasonal fluctuations, but over all it was steadily downward.

This price decline was not accompanied by a greater production and a wider distribution of product. Actual output has changed little in the last 20 years. The production of units—a unit is 1 barrel of turpentine and 3¼ barrels of rosin—from April 1, 1920, to March 31, 1921, was 525,000 as compared with 534,000 for the same period in 1938-39. The main products are turpentine, pitch, tar, and rosin, but an increasing number of others have been developed, such as pine oils, synthetic camphor, solvents, and other chemicals.

SOME practical students and active participants in the industry believe that better days may be ahead for naval stores. Until 6 or 7 years ago, the business of cutting, or wounding, longleaf and slash pine trees and collecting the sap—oleoresin—was in many respects unchanged since it was begun in the virgin pines of North Carolina in 1665. Today, production methods that are less wasteful are being used, Government conservation programs are in effect, and research deals with the development of new uses and new products.

The naval stores belt includes, roughly, the southern half of Georgia,

The production of naval stores is one of the oldest of American industries. More than three centuries ago—in 1608—the settlers of Virginia were producing pitch and tar and shipping these products to England for use in the caulking of wooden ships. Long before that, the ancient mariner Noah had been instructed when building the Ark to "pitch it within and without with pitch."

The naval stores industry in the United States expanded through the centuries, covered a wide area from Georgia to Texas, and at one time yielded the producers more than \$60,000,000 a year. But things have not gone so well in the last two decades. Wasteful production methods began to take their toll, and the competition from other products has increased.

This article covers some of the principal problems of the naval stores industry—it tells what is being done by public and private agencies in an effort to solve them.—Ed.

northern Florida, a slice of southern Alabama, and the southern quarter of South Carolina, with scattering production in Louisiana, Mississippi, and Texas. The gum naval stores belt covers a gross land area of 75 million acres. In longleaf and slash pine woods suitable for turpentering there are about 28 million acres, of which 7 million acres are being rested or have been worked out, and 11 million are in timber too small for working or mature timber held in reserve. The gum naval stores industry is the greatest single user of land in the deep South.

IN 1932-33, when production was 450,000 units—the smallest in 20 years—and net cash returned to producers at the stills was \$13,792,000

compared with the high of \$63,509,000 in 1920-21, there were about 1,000 producers who distilled their own and others' gum, and about 11,000 producers—or turpentine farmers—who simply produced and sold gum. There were in the woods perhaps 50,000 Negro workers who chipped the faces on the trees, fixed the gutters and cups into which the resin ran, gathered this with buckets, and dumped it into dip-barrels, which were trucked to the old-time pot stills. About 30 percent of the producers owned their lands while the rest operated under lease, usually made for 4 years at a fixed rental.

Banks refused to lend money in advance on naval stores crops, and the financing of the producer was in the hands of "factors" who for years dominated the industry. Cash or credit from the "factor" enabled the producer to lease land, buy supplies for his operation and his labor, which lived in his camps in the forest and received an average wage throughout the year of around \$5 or \$6 a week. Sometimes, to protect his investment, the "factor" had to take over. When he found a successful operator, he urged him to lease more land and provided the funds. The result was that as a rule the producer was in debt year after year. There are instances of record where three generations of producers in a single family were continuously in debt to the same "factor"—grandfather, father, and son.

ROSIN became an important commercial product about 50 years ago. Prior to that time most of the rosin was dumped as waste, much as cottonseed used to be. The business wormed on, using old-type stills and old methods. Often the home-made containers in which the turpentine was shipped leaked en route. The home-made rosin barrels, seamed with clay, were broken and smashed in transit and in hot weather the rosin often melted and ran out through the staves. The consensus is that the piney woods

workers didn't realize that the world beyond the woods had changed. They seem never to have given much thought to the outside buyer of their products.

Then, about 1920 cheap mineral spirits began to be substituted for turpentine in paint mixing. Cooking resin from old pine stumps developed as a rival industry. Naval stores industries developed in foreign countries cut exports which had taken for some years about half the United States output. For a number of years, most of the producers lost money, production and marketing costs as a rule being more than the selling price per unit at the still.

BEGINNING with 1934, there were several new developments. Outside capital, believing the day of the old pot still was done, began putting up modern distilling plants with the idea of buying gum spirits from surrounding areas. Today, there are five such plants in Georgia and one in north Florida. These central distillation plants cost \$30,000 to \$150,000 apiece as compared with \$2,000 to \$5,000 for the old-type stills. Some have 20 thousand and 30 thousand barrel tank capacity for the storage of crude gum. They have modern equipment for purifying and standardizing the output, and can feed the product to market in an orderly manner hitherto impossible.

These plants continue to ship turpentine in well-made wooden barrels to some extent, but most of the product now moves in tank cars. Recently a large business has been developed for the retail trade by packing turpentine in tin cans holding from 1 pint to 5 gallons. Hot rosin is shipped in vacuum tank cars to big soap-making outfits. The old-style wooden barrels for rosin are rapidly being replaced by metal drums. Many of the large processing plants are packing rosin in heavy paper bags of 100 pound net weight.

ANOTHER development has been the naval stores conservation program administered by the United States Forest Service, and the loans to producers of naval stores since 1934 by the Commodity Credit Corporation. The CCC has loans aggregating about \$15,000,000 outstanding on about 1,100,000 barrels of rosin and 60,000 barrels of turpentine. In effect, the naval stores program pays bounties to producers who follow sound practices in turpentineing their trees, prescribing no chipping of trees under 9 inches in diameter at breast height, not more than one "face" on trees under 14 inches, and the keeping of fire, which prevents reforestation by killing young trees, out of the woods.

Bounties have been offered producers for the years 1939 and 1940 on trees kept out of production because of the condition of the market and the huge carry-over now on hand. In 1939, more than 2,500 producers, representing 85 percent by volume of the entire American croppage, participated in the conservation program, and received about \$1,600,000. Estimates are that their cooperation cut the production about 25 percent. Ac-

cording to the Forest Service, in 1934-35 about 30 percent of all faces were on trees under 9 inches in diameter, breast height, whereas today it is believed not more than 6 percent is on such trees.

In 1936 was organized a national association of turpentine farmers. Membership includes more than 90 percent of all the producers by volume of production. The association is sponsoring a national advertising campaign for turpentine. It has underwritten a research program to discover new products from oleoresin and for the better exploitation of old ones.

At present 90 percent of the total consumption of rosin is used for soap, paper sizing, and varnish. Principal consumers of turpentine are paint and varnish and shoe-polish and leather-dressing, makers. Currently the demand for naval stores is steady and prices are firm. The European war seems to be having little appreciable effect, though it has temporarily closed most of the markets of Europe to the American product.

ALAN MACDONALD,
United States Forest Service.

Freight Rates on Perishables

NEW indices of railroad freight rates on perishable farm products, developed by the Bureau of Agricultural Economics, here appear for the first time. These indices depict trends in rates on perishables which have characterized the years since the outbreak of the first World War. They deal with an industry of increasing importance in recent years. Perishable shipments comprised 11.9 percent of the 95.4 million tons of agricultural carload shipments originated in 1938, and provided 40.4 percent of the 527 millions of dollars of railroad freight revenue derived therefrom.

Owing to the great distances which

separate the predominant fruit and vegetable producing areas of the Pacific coast, the Southwest, and the Southeast, from the populous consuming centers of the Northeast, a large proportion of the perishable rail traffic moves long distances. The average haul for perishable traffic is in excess of 1,400 miles. The average haul for all rail traffic was only 356 miles in 1938, and less in previous years.

THE commodities included in the indices are the more important fruits and vegetables domestically produced, and which contribute the

bulk of the perishable rail traffic. For purposes of the study, the following groupings are observed:

Citrus fruits: Oranges, grapefruit, lemons, and tangerines.

Apples.

Deciduous fruits, other than apples: Grapes, peaches, pears, plums, and fresh prunes.

Potatoes.

Truck crops, other than potatoes: Lettuce, tomatoes, celery, cabbage, carrots, onions, green peas, watermelons, cantaloupes and related melons.

During the 5-year period 1934-38, inclusive, these commodities accounted for 89 percent of total rail and boat shipments of fresh fruits and vegetables from United States origins.

For each of the commodity groups, two national indices of railroad freight rates appear in tables 1 and 2. One is computed to a 1924-29 base; the other, to a 1913 base. In addition, several regional indices, based on 1924-29, are given for citrus fruits, apples, and potatoes.

PRIOR to 1923, changes in the indices of rates on perishables were dominated, but not entirely accounted for, by the general increases in railroad freight rates of June 1918 and August 1920, and the general decreases of January and July 1922. The next landmark in freight-rate history of perishables came in 1927, when the Commission ordered substantial reductions, finally effective February 10, 1928, in rates on transcontinental shipments from Pacific-coast origins of fresh deciduous fruits other than apples pursuant to a decision governed by the Hoch-Smith Resolution.¹ This was a joint resolution of Congress, approved January 30, 1925, the intent of which was to secure the lowest possible lawful rates on the products of depressed segments of agriculture.

The issue was carried before the Supreme Court which, in June 1930,

reversed the decree of the lower court and set aside the above decision of the Interstate Commerce Commission.² The Supreme Court ruled that the Hoch-Smith Resolution, a vital piece of legislation from the viewpoint of agriculture, had made no changes in the existing law and had, therefore, afforded the Commission no authority for prescribing rate reductions not lawful independently of that resolution. The prior rates were restored, effective July 19, 1930. The rate changes mentioned exerted a marked influence upon the index of rates on deciduous fruits other than apples.

¹ *Ann Arbor R. R. Co., et al. v. United States* 281 U. S. 658.

Table 1.—Indices of Published Freight Rates on Domestic Rail Shipments of Fresh Fruits and Vegetables. United States, 1913-38

Year beginning July	[1913=100]				
	Citrus fruits	Apples	Deciduous fruits other than apples	Potatoes	Truck crops other than potatoes
1913	100	100	100	100	100
1914	100	100	100	100	100
1915	100	100	100	100	102
1916	98	100	100	100	102
1917	98	102	100	103	104
1918	121	119	125	127	129
1919	121	127	125	130	127
1920	157	169	155	173	164
1921	153	157	166	167	151
1922	144	153	150	155	148
1923	138	153	150	154	148
1924	134	153	150	154	148
1925	134	153	150	154	148
1926	134	153	149	154	148
1927	134	153	148	154	148
1928	133	153	139	155	147
1929	133	153	138	155	147
1930	133	153	146	155	146
1931	132	153	147	155	146
1932	132	145	147	153	146
1933	124	129	140	151	145
1934	121	127	132	150	144
1935	120	128	130	145	144
1936	114	127	130	143	143
1937	114	123	124	144	146
1938	117	123	130	147	151

Bureau of Agricultural Economics. The above indices are of the weighted aggregative type. They are based upon averages of rates in effect during the year, in the computation of which successively applicable rates are weighted by the estimated proportion of annual shipments moved thereon, assuming an average seasonal distribution of shipments. The weights used in computing the indices are based on average tons shipped during the 5-year period 1934-38, inclusive.

¹ *California Growers' and Shippers' Protective League v. Southern Pacific Co. et al.*, 129 I. O. C. 25, 132 I. C. C. 582.

WITH the advent of the depression of 1929 the carriers faced a decline in traffic out of proportion to the diminution of industrial production. New developments in highway and water transportation introduced a period of intense competition. During the past decade, there has been a considerable diversion of tonnage from the rails to highway and water carriers. The railroads, in the effort to main-

tain their relative position, have instituted numerous reductions in rates on perishables—as well as on other commodities—to meet the competition of motortrucks or boats, or to make possible the shipment of products which might otherwise have been diverted to local sale or abandoned altogether.

The combined effects of depression and competition expressed themselves in an impaired credit position of the

Table 2.—Indices of Published Freight Rates on Domestic Rail Shipments of Fresh Fruits and Vegetables from Specified Origin Areas to Destinations in United States, 1913-38

[1924-29=100]

Year beginning July	Commodity and origin area											
	Citrus fruits				Apples			Deciduous fruits other than apples	Potatoes			Truck crops other than potatoes
	Pacific Coast	Texas	Florida	United States ¹	Pacific Coast	Virginia	United States ²		United States	Maine	Idaho		United States^{2}	United States
1913.....	73		67	75	67	52	65	69	56	75	65	68
1914.....	73		67	75	67	52	65	69	58	73	65	68
1915.....	73		67	75	67	54	66	69	58	73	65	69
1916.....	73		67	73	67	54	66	69	58	73	65	69
1917.....	73		67	73	67	62	66	69	63	73	67	70
1918.....	91		84	90	78	78	78	86	80	91	82	87
1919.....	91		84	90	83	78	83	86	80	91	84	86
1920.....	117		111	117	111	110	111	106	112	118	112	111
1921.....	115		104	114	102	111	102	114	109	112	108	102
1922.....	109	104	100	107	100	100	100	103	100	100	100	100
1923.....	104	103	100	103	100	100	100	103	100	100	100	100
1924.....	106	103	100	100	100	100	100	103	100	100	100	100
1925.....	100	103	100	100	100	100	100	103	100	100	100	100
1926.....	100	103	100	100	100	100	100	102	100	100	100	100
1927.....	100	103	100	100	100	100	100	102	100	100	100	100
1928.....	100	94	90	99	100	100	100	95	100	99	100	99
1929.....	100	93	99	99	100	100	100	95	100	99	100	99
1930.....	100	93	99	99	100	100	100	100	100	99	100	99
1931.....	100	93	94	99	100	94	100	101	100	99	100	99
1932.....	100	93	98	99	95	86	95	101	100	99	99	99
1933.....	93	86	91	92	84	86	84	96	98	98	98	98
1934.....	93	83	82	90	83	86	83	91	97	92	97	99
1935.....	93	83	78	89	83	86	84	89	93	90	94	98
1936.....	89	77	71	85	82	86	83	80	93	88	92	97
1937.....	89	76	72	85	80	86	81	85	94	89	93	99
1938.....	92	79	73	88	79	91	81	89	92	93	95	102

¹ Texas rates are included throughout. The exceptional behavior of the "paper rates" on hypothetical shipments of Texas citrus before the development of the Texas citrus industry renders inadvisable the publication of the Texas series for the years 1913 to 1921. The distorting influence upon the national citrus index is not serious.

² Origin areas represented are not limited to those for which separate indices are given.

Bureau of Agricultural Economics. The above indices are of the weighted aggregative type. They are based upon averages of rates in effect during the year, in the computation of which successively applicable rates are weighted by the estimated proportion of annual shipments moved thereon, assuming an average seasonal distribution of shipments. The weights used in computing the indices are based on average tons shipped during the 5-year period 1934-38, inclusive.

railroads. Two cases before the Commission brought by the carriers in the hope of securing authority for general rate increases resulted in compromise systems of temporary surcharges designed to alleviate the strain upon railroad credit and help the carriers to meet their fixed obligations.³ During the first surcharge period, from January 4, 1932, until October 1, 1933, a moderate surcharge of 1 cent per 100 pounds was permitted on shipments of citrus fruits and truck crops, except potatoes, but domestic deciduous fruits and potatoes were unaffected. During the second period, from April 18, 1935, until December 31, 1936, fewer rates on perishables were increased than in the preceding case. Maximum surcharges of 3 cents per 100 pounds were made permissive on fresh grapes, berries, and minor deciduous fruits.

THE most recent general change in rates affecting perishable shipments was in 1938, when the Commission, in the *Fifteen Percent Case*, 1927-38, 226 I. C. C. 41, authorized increases in railroad freight rates of 5 percent on agricultural products, and 10 percent on nonagricultural products. These increases became effective March 28, 1938. The railroads at the time were admittedly in a dire financial position. Not all of the increases, however, have since been maintained.

During the past decade, competitive rate reductions have outweighed horizontal percentage changes in rates. Charts recently published by the Interstate Commerce Commission⁴ provide a rough indication of the extent to which potential rail tonnage

has been shipped by other means of transportation, or diverted to local use or manufacture. Comparisons of 1938 with 1929 indicate that although the production of fresh fruits increased nearly one-fourth from 1929 to 1938, tonnage of fresh fruits originated by rail dropped by a like proportion. Similarly, the production of fresh vegetables was slightly greater in 1938 than in 1929, but the tonnage of these commodities originated by rail in 1938 declined roughly to 75 percent of the 1929 traffic.

Water carriers, also, have invaded fields of service once dominated by the railroads. The outstanding instance concerns Florida citrus shipments. Prior to 1930, the movement of Florida citrus by water to eastern port cities was negligible. During the season 1936-37 65 percent of citrus shipments to these cities—Boston, New York, Philadelphia, and Baltimore—moved by water.

Table 3.—Indices of Prices of Farm Products Compared with Indices of Railroad Freight Rates on Perishables, 1938

Commodity	1938			
	1913=100		1924-29=100	
	Index of prices of farm products	Index of freight rates ¹	Index of prices of farm products	Index of freight rates ¹
Citrus fruits.....	(2)	117	33	88
Apples.....	92	123	70	81
Deciduous fruits, other than apples.....	(2)	130	(3)	89
Potatoes.....	82	147	50	95
Truck crops, other than potatoes.....	101	151	89	102

¹ Year beginning July.

² Indices of farm prices of citrus fruits and deciduous fruits, other than apples are not available. The general index of farm prices of "fruits" July-June, as computed from the Yearbook of Agriculture and Agricultural Statistics is 72.

³ Not available. General index of "all fruits" is 52.

⁴ August 1900-July 1914=100.

Bureau of Agricultural Economics.

³ The *Fifteen Percent Case*, 1931, 178 I. C. C. 539; 179 I. C. C. 215, and *Emergency Transportation Charges*, 1935, 208 I. C. C. 4; 215 I. C. C. 439; 219 I. C. C. 565.

⁴ Graphical supplement to monthly reports, series 1940, No. 1.

THE impact of changes in freight rate levels upon the interests of agricultural shippers depends primarily upon the relationship of rates to destination prices, rather than upon the absolute levels of the rates considered independently. Table 3 contains comparative data bearing upon this point, with the 1938 values of the national indices repeated. These figures show that, whether 1938 indices of prices and rates are based upon pre-war levels, or upon 1924-29

levels, prices in 1938 (farm prices for want of destination prices) were relatively much lower than freight rates on the corresponding commodities. Taking either of the two base periods as the point of departure, the trend has been toward an increase in the relative cost of transportation to market—the proportion of destination price absorbed by transportation charges.

C. C. MATLOCK.

United States: Exports and Imports of Specified Agricultural Commodities, April, 1939 and 1940, and September-April, 1938-39 and 1939-40 ¹

Commodity	Unit	April		September-April	
		1939	1940	1938-39	1939-40
Exports:					
Pork:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Cured pork ²	Pound.....	6, 119	2, 353	44, 180	40, 886
Other pork ³	Pound.....	1, 931	2, 604	24, 523	65, 500
Total pork.....	Pound.....	8, 050	4, 957	68, 703	106, 386
Lard, including neutral lard.....	Pound.....	17, 531	18, 849	167, 761	181, 032
Wheat, including flour.....	Bushel.....	9, 518	3, 837	70, 064	33, 993
Apples, fresh ⁴	Bushel.....	634	96	11, 162	2, 717
Pears, fresh.....	Pound.....	550	250	131, 151	64, 028
Tobacco, leaf.....	Pound.....	18, 677	15, 864	363, 552	224, 290
Cotton, excluding hinters (500 pounds).....	Bale.....	187	307	2, 918	5, 780
Imports:					
Cattle.....	Number.....	126	71	550	418
Beef, canned including corned.....	Pound.....	8, 640	4, 488	48, 376	53, 506
Hides and skins ⁵	Pound.....	25, 298	22, 601	200, 370	218, 141
Barley malt.....	Pound.....	11, 287	6, 754	63, 507	45, 089
Sugar, cane (2,000 pounds).....	Ton.....	224	293	1, 446	2, 071
Flaxseed.....	Bushel.....	1, 416	1, 119	13, 573	9, 623
Tobacco, leaf.....	Pound.....	3, 546	5, 273	37, 091	40, 537
Wool, excluding free in bond for use in carpets, etc.....	Pound.....	7, 109	12, 466	45, 224	139, 455

¹ Corrected to May 24, 1940.

² Includes hams, shoulders, bacon, and sides.

³ Includes fresh, frozen, pickled, salted, and canned.

⁴ Includes baskets, boxes, and barrels, in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records of the Bureau of Foreign and Domestic Commerce.

Correction: The Commodity Credit Corporation reports two errors in the table accompanying the article "Commodity Credit Corporation Loans" in the May 1940 issue. Under *Wool* and *Mohair* the total quantity placed under loan in the 1938 program, given as 19,179, (000) pounds should read 82,588, (000), and the total for the 1938 and 1939 changed to read 91,531, (000) pounds. The figure 19,179, (000) represents the quantity pledged to secure the loans finally assumed by the Commodity Credit Corporation rather than the total quantity placed under loan. . . . For 1934 *Rosin* the average loan rate of \$4.46 was on a 280-pound unit. The figure comparable to the 1938 and 1939 rates, which were on a 500-pound barrel, is \$7.99.

Farm Real Estate Values

SEVERAL favorable factors account for an increase of about 1 percent in the average of farm real estate values the country over during the year ended March 1, 1940. These included a substantial rise in prices of farm products following the outbreak of the European war, and an increase of more than 400 million dollars in farmers' cash income from marketings and Government payments in 1939 compared with 1938. Except for 1937, farmers' cash income of 8.5 billion dollars in 1939 was the highest since 1930.

Other favorable factors included the continuation of low interest rates on farm mortgages, the relatively low cash payments required in the purchase of lands held by public and private credit agencies, and the expectancy of a possible increase in demand for agricultural products as a direct or indirect result of the war. Farmers' cash income was larger in the first quarter of 1940 than in the like period of 1939, and it was expected that similar gains would be made in the second quarter.

THE index of average value per acre of farm real estate was 85 as of March 1 last, compared with 84 on March 1, 1939, and with 85 on the corresponding dates in 1937 and 1938. Values have fluctuated little in the last 4 years, but now average about 16 percent above the depression low levels in 1933 when the index of the national average was 73. These indexes are constructed on a base of 100 for the years 1912-14. The 1930 index was 115, and the 1920 index was 170.

Factors operating to prevent a larger rise in farm real estate values during 1939 included the large number of farms held for sale by lending agencies as a result of farm mortgage foreclosures, and the availability of a large number of farms owned by elderly farmers or by estates in process of liquidation. Other counteracting factors included a continuing relatively high level of farm real estate taxes and a low level of purchasing power of farm products in terms of other commodities.

ONLY one major geographic division—the West North Central States as a group—failed to show an increase in farm real estate values during the past year. The decrease in this division was about 1 percent. The largest increase in values, amounting to about 3 percent, was in the East South Central Division. Average farm land values increased in 25 States, decreased in 6, and were unchanged in 17.

For the entire country, average farm real estate values are about 15 percent below the 1912-14 level, although in 15 States the average values exceed those of the base period. Average values in all States are below the 1930 levels, and in only 3 States—Indiana, North Carolina, and Louisiana—equal to or above the 1931 levels. In 14 States, values are above those reported in 1932, and in all States except North Dakota, South Dakota, and Nebraska the values are equal to or above values in 1933.

A. R. JOHNSON.

Maple products.—Fewer maple trees were tapped this season than last—10.1 million trees as compared with 10.5 million in 1939. But the production of sirup was larger this season—2.6 million gallons as compared with 2.5 million. The sap was unusually sweet. The sirup was of high quality.

Economic Trends Affecting Agriculture

Year and month	Indus- trial pro- duction (1923- 25=100) ¹	Income of Indus- trial workers (1924- 29=100) ²	Cost of living (1924- 29=100) ³	(1910-14=100)				Farm wages	Taxes
				Whole- sale prices of all commo- dities ⁴	Prices paid by farmers for commodities used in— ⁵				
					Living	Pro- duction	Living and pro- duction		
1925	104	98	101	151	164	147	157	176	270
1926	108	102	102	146	162	146	155	179	271
1927	106	100	100	139	159	145	153	179	277
1928	111	100	99	141	160	148	155	179	279
1929	119	107	99	139	158	147	153	180	281
1930	96	88	96	126	148	140	145	167	277
1931	81	67	88	107	126	122	124	130	253
1932	64	46	79	95	108	107	107	96	219
1933	76	48	76	96	109	108	109	85	187
1934	79	61	78	109	122	125	123	95	178
1935	90	69	80	117	124	126	125	103	180
1936	105	80	81	118	122	126	124	111	182
1937	110	94	84	126	128	135	130	126	187
1938	86	78	82	115	122	124	122	124	186
1939	105	83	82	113	120	122	121	124	
1939—May	92	75	81	111			120		
June	98	80	81	110	119	121	120		
July	101	80	81	110			120	126	
August	103	83	81	109			119		
September	111	86	82	115	122	123	122		
October	121	91	82	116			122	126	
November	124	93	82	116			122		
December	128	93	82	116	121	123	122		
1940—January	119	93	82	116			122	119	
February	109	89	82	115			122		
March	104	87	82	114	121	125	123		
April	102	86	82	115			123	124	
May ⁷				115			123		

Index of prices received by farmers (August 1909-July 1914=100)									Ratio of prices received to prices paid
Year and month	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Poultry and eggs	All groups	
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	156	144	139	91
1928	130	152	176	159	151	158	153	149	96
1929	120	144	141	149	156	157	152	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1939—May	72	72	85	88	112	92	85	90	75
June	73	73	93	105	107	94	83	89	74
July	66	73	80	99	107	96	89	89	74
August	64	71	70	99	101	100	90	88	74
September	83	76	73	117	117	107	102	98	80
October	77	74	73	128	112	112	108	97	80
November	79	75	60	123	107	117	117	97	80
December	87	82	65	96	101	118	97	96	78
1940—January	90	85	66	117	103	119	91	99	83
February	91	85	76	168	161	118	98	101	83
March	92	85	73	128	102	114	83	97	80
April	96	85	81	145	104	110	82	98	79
May	92	83	88	133	108	106	84	98	78

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1925=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real-estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

Note: The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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DOMESTIC DEMAND GOOD, FOREIGN DEMAND POOR. This sums up the market prospects as farmers get under way a new selling season. Most of the early crops are turning out better than had been expected. Slaughter supplies of hogs are declining, other livestock increasing. Spring pig crop was smaller this year than last, ditto the prospects for fall crop. Total supply of food, feed, and fibers is ample for domestic needs and large reserves. * * * Principal farm commodities except hogs have been selling higher this summer than last. Farm cash income increases seasonally this month, will increase more through October. Total for first six months of 1940 was higher than in 1939, may be higher in last half of year also. * * * Rising industrial activity is stimulated by defense program. This should mean larger consumer incomes during last half of year, in turn a stronger consumer demand for meats, dairy products, poultry products, fruits, and vegetables.

Commodity Reviews

DOMESTIC DEMAND: Rising

RECENT European developments have given additional force to the rise of industrial activity which began early in May. Preparations for our own defense program also have stimulated domestic business. Unless the war should end, this probably will result in a higher level of consumer purchasing power during the last half of 1940 than in the first half. The domestic consumer demand for meats, dairy and poultry products, fruits and vegetables will be strengthened by these developments.

Part of the recent increase of industrial production reflects increased buying of industrial goods by businessmen who are afraid that we may be short of some products such as steel later on, and that prices may go up. This means that a part of the present pick-up in orders is at the expense of buying at some later time, when inventories now being built up will be drawn upon. This would be the same kind of situation which occurred soon after the "war boom" of last fall. In this case, however, we have a vastly increased domestic defense program coming along to take up the slack.

If the war should suddenly end it is possible that the stoppage of British war orders plus the general uncertainty would cause business men to postpone further buying of industrial goods, leading to a temporary set-back of business activity. In view of the heavy Government defense expenditures in prospect, however, it does not appear probable that any recession which might develop would be either prolonged or severe.

F. L. THOMSEN.

PRODUCTION: Good Start

The new crops seem to be turning out much better than had been expected earlier in the season. Wheat

production will be only slightly smaller than the average for the last 10 years, a rye crop of average size is in the making, and the output of feed grains should be substantially above average, according to the Crop Reporting Board.

The Board said in June: "With pastures good and present and prospective grain and hay supplies ample, feed conditions are favorable for the production of livestock and livestock products. On June 1 the reported rate of milk production per cow and the number of eggs produced per 100 hens were the highest on record for that date."

Viewing crop production as a whole, it was indicated that good yields may more than offset the smaller acreage this year. June 1 returns from crop reporters as to composite prospects for "all crops" averaged about 5 percent higher than at the corresponding time a year ago, but about 2 percent below the "quite favorable" reports of 2 years ago.

EXPORTS: Reduced

United States exports of agricultural products have been sharply reduced in recent months. The total—excluding cotton and pork products—was smaller during the first nine months of the European War than in the like period a year earlier. Prospects for an immediate increase in exports are not good.

Meanwhile, new crops are being made in the United States, and large quantities of principal agricultural products will be available for export during the next 12 months. Rough estimates indicate more than 300 million bushels of wheat for carry-over and export during this period, a surplus of between 500 million and 1 billion bushels of corn (depending on the size of this year's crop), approximately 500 million pounds of lard, and 500 million pounds of pork.

The United States could export large quantities of evaporated milk and some butter without materially raising prices to our consumers. Fruits, tobacco, and cotton will be in abundant supply to satisfy domestic needs and permit large exports. Cotton supply above domestic mill consumption and reserves will be more than 10 million bales. United States production of soybeans this year has been tentatively estimated at 100 million bushels—the largest crop on record.

PRICES: Lower

The break in farm commodity prices following the lightning thrusts through Europe is reflected in the Government index of prices as of June 15. As of that date, the general average of prices received by farmers was 95 percent of the pre-World War base of 100. This compares with 98 as of May 15, and with 89 in June last year.

The latest index figure reveals that part of the increase that occurred at the outbreak of European War last September has been canceled. The index of prices received was 88 last August, and a month later the index was

98. Wheat has been the principal loser in the recent decline, nevertheless wheat and most other leading commodities except hogs are selling higher this summer than last.

The recent decline in the average of prices received has reduced the buying power of farm products, since prices farmers pay for commodities used in production and for living have been

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1939			
June.....	89	120	74
July.....	89	120	74
August.....	88	119	74
September.....	98	122	80
October.....	97	122	80
November.....	97	122	80
December.....	96	122	79
1940			
January.....	99	122	81
February.....	101	122	83
March.....	97	123	79
April.....	98	123	80
May.....	98	123	80
June.....	95	123	77

¹ Ratio of prices received to prices paid.

² Revised.

Prices of Farm Products

Estimates of average prices received by producers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	June average, 1910-14	June 1939	May 1940	June 1940	Parity price June 1940
Cotton, lb.....	cents.. 12.4	12.7	8.7	9.8	9.5	15.87
Corn, bu.....	do.. 64.2	68.4	49.9	63.4	63.5	82.2
Wheat, bu.....	do.. 83.4	89.0	62.5	80.7	67.4	113.2
Hay, ton.....	dollars. 11.87	12.16	6.63	8.32	7.71	15.19
Potatoes, bu.....	cents.. 69.7	71.8	61.0	83.5	85.7	87.6
Oats, bu.....	do.. 39.9	41.8	29.9	36.6	32.7	51.1
Soybeans, bu.....	dollars. (1)	(1)	.83	96	.79	(1)
Peanuts, lb.....	cents.. 4.8	5.2	3.4	3.7	3.5	6.1
Beef cattle, cwt.....	do.. 5.21	5.44	6.81	7.35	7.10	6.67
Hogs, cwt.....	do.. 7.22	7.16	5.96	5.35	4.82	9.24
Chickens, lb.....	cents.. 11.4	11.9	13.4	13.6	13.3	14.6
Eggs, doz.....	do.. 21.5	16.7	14.9	15.1	14.4	21.3
Butterfat, lb.....	do.. 26.3	23.4	22.2	26.9	25.6	31.4
Wool, lb.....	do.. 18.3	17.5	21.9	27.6	28.6	23.4
Veal calves, cwt.....	dollars. 6.75	6.77	7.98	8.91	8.46	8.64
Lambs, cwt.....	do.. 5.87	6.30	7.49	8.25	8.12	7.51
Horses, each.....	do.. 133.60	138.90	81.30	76.10	75.00	174.80

¹ Prices not available.

² Adjusted for seasonality.

practically unchanged. The purchasing power figure for June 15 was 77 percent of the pre-World War base of 100, compared with 80 in May, and with 74 in June last year.

INCOME: Increase

Farmers' cash income from marketings and Government payments in the first 6 months of 1940 was approximately 300 million dollars more than in the like period of 1939. Total for the first 6 months of 1939 was 3,532 million dollars. Much of the increase was from marketings of grains and dairy products. Prices of farm products declined sharply in the last half of May, nevertheless the average for all except hogs was higher in the first 6 months of 1940, compared with 1939.

The following table gives totals for May and for January through May with comparisons. Income in June was probably smaller than in May, but larger than the 531 million dollars for June last year. Income in July usually is sharply higher than in June, upped by receipts from the new winter-wheat crop. Income from vegetables also commonly reaches its monthly peak for the year in July.

Month and year	Income from marketings	Income from Government payments	Total
	<i>Mill. doll.</i>	<i>Mill. doll.</i>	<i>Mill. doll.</i>
May.....			
1940.....	508	28	626
1939.....	528	80	608
1938.....	521	44	565
January-May:			
1940.....	2,858	385	3,243
1939.....	2,587	362	2,949
1938.....	2,639	212	2,851

WHEAT: Supply

News comes of damaged European crops as winter wheat growers in this country are in the midst of a new harvest.

The United States crop is smaller this year than last, but carry-over

stocks plus prospects for spring wheat indicate a total United States supply of about 1 billion bushels—about the same as in 1939. Should domestic disappearance total 675 million bushels during the coming year, the quantity for export during the year and for carry-over on July 1 next would be about 330 million bushels. This compares with 326 million bushels a year earlier.

The 1940-41 supply of wheat outside the United States may be 100 million to 200 million bushels smaller than the 4,450 million bushels supply estimated for 1939-40. Smaller production this year than last will be offset in part by the larger carry-over this July 1. Most of the reduction in this year's crop is in Europe. The Argentine crop—available in January—probably will be larger than the small outturn last year, but there may be some reduction in the Australian crop as a result of dry weather.

Exportable supplies in surplus producing countries—including the United States—will total about 1 billion bushels this year. This is about double the average of net world imports during the last 5 years.

COTTON: Outlook

European events weigh heavily upon the outlook for cotton, nevertheless prices have been doing better than had been expected a month or so ago when it appeared that export demand for the staple would be greatly diminished. Exports have declined and even though it appears likely that the United States will again have a large carry-over of cotton this year, prices have averaged about 10 percent higher this summer than last.

Principal strengthening factor in the cotton situation is the prospect for improved domestic business conditions this summer. Domestic mill activity has increased from the low point reached in late May, and may increase more. Activity currently is at a higher rate than it was last sum-

mer. Manufacturers' sales of cotton goods greatly exceeded production in mid-June. It is not likely, however, that domestic cotton mill activity will increase enough to offset the loss of foreign markets.

United States exports of cotton—supported by the Government program—totaled 5.9 million bales from August 1 through June 20, compared with 3.2 million bales in 1939, and with 5.5 million in 1938. Approximately 70 percent of the total this year went to Europe. The European War now adversely affects United States exports to countries which have consumed about 4.8 million bales of cotton in recent years, of which more than 2 million bales were supplied by the United States.

FEED: Ample Supply

Preliminary indications are that the total supply of feed grains will be slightly smaller this year than last, but more than enough for the number of livestock on farms this fall and next winter. Much depends, of course, upon the making of the corn crop this month and next.

In late June, it was indicated that the supply of corn—new crop plus carry-over—may be about 100 million bushels smaller this year than last. A larger supply of oats and barley was indicated, and a larger crop of grain sorghums. A hay crop of near-record proportions was indicated. Supplies of byproduct feeds are expected to be comparatively large.

HOGS: Improvement

The hog situation improved in early July as prices advanced more than \$1 per cwt. Slaughter supplies of hogs are declining, but marketings of sows are increasing. This means an increase in average weights. Feed prices stay high in relation to hog prices, and the foreign outlet for pork has practically disappeared. Exports of lard to the United Kingdom have been neg-

ligible, but this has been partly offset by increased exports to a few other countries. Trade reports in early July indicated increased orders from Great Britain.

Total slaughter supplies are larger this summer than last, though the spread is narrowing as contrasted with the large excess in earlier months. Storage holdings of pork are a little larger this summer than last, but holdings of lard—283 million pounds as of June 1—are the largest on record for this time of year. To help relieve the general situation, the FSCC has been making large purchases of pork and lard for distribution to persons on relief.

Producers have reported a smaller pig crop this spring—approximately 48.0 million head as compared with 52.3 million in the spring of 1939. Of the total 1940 spring crop, 36.2 million head are in the Corn Belt, compared with 38.1 million in 1939. The largest spring crop on record in the Corn Belt was 44.2 million in 1931.

The number of sows bred to farrow next fall has been indicated at 4.5 million, compared with 5.1 million in the fall of 1939. * * * All figures suggest a total production—spring and fall combined—of 75.8 million pigs in 1940, compared with 84.3 million in 1939. (The 1939 crop was the largest in 16 years of Government record.)

The big question for the coming year is whether the reduction in the pig crop will be more than offset by the lack of foreign demand.

CATTLE: Marketings

Marketings of fed cattle have been increasing but prices have held up. Marketings will continue large this month and next, but some improvement in consumer demand for all meats is in prospect. Slaughter supplies of cows and heifers will increase seasonally during late summer and fall, but marketings of such cattle are expected to continue smaller than a year earlier throughout the year.

Less than half of the total cattle slaughter consisted of cows and heifers this spring. This holding back of breeding stock reflected favorable range and pasture conditions. Winter and spring losses of cattle were smaller than the average for most recent years, cattle generally made good gains this spring, and prospects for the 1940 calf crop were quite favorable. Prices of slaughter cows tended to increase as marketings of breeding stock were reduced.

Cattlemen look for an increase in the number of cattle in the Great Plains during the next few years, provided range conditions continue favorable during this period. A strong demand for breeding stock was reported in this area this spring, from the Canadian border south through Montana and North Dakota to New Mexico and Texas.

LAMBS: Increase

Available information indicates that the 1940 lamb crop—total for the entire country—was about the same as or a little larger than the 1939 crop. The western lamb crop was larger this spring than last, the native lamb crop was about the same as in 1939. Western production was favored by unusually good lambing conditions; in the native sheep States the season began poorly, then improved.

Slaughter supplies of sheep and lambs may be a little larger this summer than last, due principally to the better development of the crop in the western sheep States, the prospects for a smaller proportion of the western lamb crop marketed as feeder lambs this year than in 1939, and indications that marketings of spring lambs from the native sheep States will be somewhat later this year than last.

It is expected, however, that the effect of the larger slaughter supplies upon lamb prices will be offset to some extent at least by a stronger consumer demand for meats.

WOOL: Favored

Three recent developments are favorable to the disposal of the 1940 domestic wool clip. They are the current rise in domestic industrial activity, the award of contracts by the War Department for relatively large quantities of wool cloth and blankets, and the sharp decline in imports of apparel wool.

Domestic mill consumption of wool declined sharply during the early months of this year, but it is believed that consumption will increase now. Prices of wool, already about 25 percent higher than in 1939, strengthened following the announcement of projected purchases by the War Department. Wool is one of the few agricultural commodities now selling higher than the parity price as computed under provisions of the Agricultural Adjustment Act.

The bulk of the 1939-40 clip in South America and the Union of South Africa had been sold by June. Exports from Argentina and Uruguay during the first 7 months of the season through April were 5 percent larger than the average for the like period in the preceding 5 years; exports from the Union of South Africa were smaller. Offerings of wool in most foreign markets are likely to be restricted until the new Southern Hemisphere clip is available in the fall.

FRUITS: Reduction

Smaller crops this year, but enough for domestic needs—in view of the diminished exports—sums up the outlook for fruits. Smaller crops than a year ago are indicated for apricots, cherries, peaches, pears, plums, dried prunes, and possibly grapes; larger crops include summer oranges and lemons, strawberries, and a few miscellaneous fruits. The condition of apples in commercial areas on June 1 was slightly below that of a year ago.

Government agricultural economists believe that, because of the war in

Europe, the exports of fresh fruits other than citrus will be negligible this season. Citrus probably will go to Canada in normal volume; quantities may go also to the United Kingdom cut off from trade with Italy and Palestine. BAE says that "if methods of payment can be arranged and shipping space is available, the United States could supply the United Kingdom with a large quantity of citrus, dried fruits, and canned fruits."

Peaches are a smaller crop this year in the early Southern and North Central States, but California production for canning and drying is about as large as that of last season. The pack of both canned and dried apricots probably will be small. The carry-over of canned pears is small, but of dried pears relatively large. Most fresh fruits have been selling higher this summer than last.

TRUCK CROPS: Increase

Marketings of truck crops are increasing seasonally, as production from market garden areas is added to supplies from more distant commercial producing areas. Fresh vegetables in larger market supply this summer than last include beets, cabbage, cantaloups, carrots, green peas, green peppers, tomatoes, and watermelons. Products in smaller supply are celery, cucumbers, eggplant, lettuce, onions, and snap beans.

Prices of fresh vegetables have been slightly higher this summer than last, reflecting smaller total supplies and improved consumer demand. The seasonal peak of supplies will be in August and September. Farm income from vegetables in July is usually larger than in any other month of the year. Total for this month in each of the last 2 years was 70 million dollars.

An increase of about 16 percent in acreage of vegetables for processing this season was indicated by various plantings reports received through

June. Increases were indicated for all commodities except spinach and pimientos. Carry-over stocks are generally smaller than a year ago, but with average yields on the increased acreage this year total supplies probably will be ample for domestic requirements.

POTATOES: Supply Up

Heavy marketings of potatoes are in prospect this month and next. This is indicated by a considerable increase in the crop in the intermediate producing States this year, and the fact that shipments of some of the early maturing varieties produced in the late States will be moving to market during this period. A crop of 10.8 million bushels, or about 26 percent more than in 1939, has been indicated for the first section of intermediate States; the second section has a larger acreage this year, and yield prospects are favorable.

Market prices of new potatoes declined in June as shipments increased, but averaged higher than in June last year. Favorable factors were the decreased supply of old stock potatoes and an improved consumer purchasing power. Market prices of potatoes usually decline through July and August when the peak of market supplies is reached.

FATS, OILS: Decline

Recent declines in prices of most domestic fats and oils, oilseed meal, and oilseeds reflect the loss of foreign markets resulting from the German occupation of Denmark, Norway, Netherlands, and Belgium. Ten to 15 percent of our total foreign outlets for lard, and more than half of the export markets for soybeans and oilseed cake and meal have been adversely affected.

United States imports of certain vegetable oils from the Netherlands have been cut off, as well as fish-liver oils from countries bordering the North Sea. Extension of the war to

Southern Europe and North Africa means that imports of olive oil may virtually cease. The reduction in imports of edible fats from Europe probably will equal or exceed the losses in exports of lard, soybeans, and other fats.

Domestic production of fats and oils is now equivalent to about 90 percent of total domestic requirements. At the present time a surplus exists in some lines of edible fats and a deficit in certain industrial oils, notably quick-lathering oils for soap, and the drying oils.

MILK: Big Production

Milk is flowing in unusually heavy volume this summer in response to good pasturage and supplemental feeding induced by the higher prices—as compared with a year ago—for milk and butterfat. Consumption of butter exclusive of relief distribution is slightly higher than a year ago, the demand for evaporated milk has increased, but the demand for cheese has shown the least change of the manufactured dairy products.

An increase in industrial production would further strengthen the domestic demand for dairy products. Exports of condensed, evaporated, and dried milk products have increased in recent months, but foreign markets are not an important outlet for our dairy products. Of greater importance are the developments in the domestic market.

Milk production will decline seasonally during the next 4 to 5 months, but the output will continue above average for corresponding months in recent years. BAE says the larger number of cows on farms, the improvement in pastures, and the higher prices for dairy products will tend to keep production high unless the weather should become unfavorable.

MARGARINE: Decrease

Production of oleomargarine in 1939

was the smallest since 1934, reflecting the large supplies and low prices of butter during the past year. Total output was 301 million pounds, compared with 380 million pounds in 1938, and with 392 million in 1937. Consumption of margarine averaged 2.3 pounds per capita in 1939, compared with 3.0 pounds in 1938.

Cottonseed oil and soybean oil have largely displaced coconut oil in the manufacture of margarine in recent years. Coconut oil contributed 75 percent of the total fats in 1933, but made up only 16 percent of the total in 1939.

EGGS: Production Down

Production of eggs has declined rapidly in recent months, the output for July probably aggregating 3 billion to 3½ billion eggs as contrasted with more than 5 billion in April. April is the peak production month of the year. Production has been somewhat larger than in the corresponding months a year earlier, but prices to farmers show little difference, having been supported by the better consumer demand this spring and summer than last, and by FSCC purchases.

The relationship between egg prices and feed prices continues unfavorable to producers as compared with a year ago and with the 1929-38 average. This indicates that the demand for summer hatched chicks for pullet production will be smaller than is usual. Commercial hatcheries reported about 14 percent fewer chicks hatched during January-May this year compared with last.

Hatchery reports indicate that not many late turkeys will be raised this year. Total production of turkeys will be smaller than in 1939, but not to the extent of the decrease indicated by commercial hatcheries alone. Farmers had indicated in February they would buy fewer hatchery poults, but that they would produce more poults at home.

FRANK GEORGE.

This Changing Agricultural World

III: Wheat

A MARKED increase in world wheat acreage—principally in the U. S. S. R., Europe, Canada, and the Southern Hemisphere—has largely accounted for the larger world production during the past 20 years, though yields have been an important contributing factor in strengthening or modifying the production trend. Increased yields have been of particular significance in Europe. The major part of the increase in total production has been in Russia, the Danube Basin, and European importing countries. Production has increased in Australia and Argentina, and in a number of non-European importing countries such as Japan, South Africa, New Zealand, Brazil, and Peru.

While most of the increase in the Russian crop has been used domestically, a certain quantity of Russian wheat has also become a factor in world trade, together with the larger quantities from the Danube Basin and the Southern Hemisphere. The increased quantities in European and non-European importing countries also have affected foreign trade. During the 1920's net exports and imports of 750 to 800 million or more bushels were considered as "normal," with an all-time high record of more than 900 million bushels in 1928-29. During the past decade, however, exports and imports have been ranging mostly from 500 to 600 million bushels, or about one-third less. This decline has been largely a result of increased production in importing countries and of foreign government controls which have adversely affected the wheat exporting countries.

DURING the period of increased wheat exports, shifts in foreign trade were largely limited to seasonal crop changes. The four principal exporting countries—United States, Can-

Wheat is an outstanding example of the great changes which have occurred throughout the agricultural world in the last 20 years. The world wheat acreage has been greatly expanded and production increased to new record levels; consumption has also increased but at a less rapid rate, so that carry-over stocks have become an important feature of the wheat situation; prices have declined to record low levels as supplies increased, and similarly foreign trade in wheat and flour has been curtailed following increased production and import restrictions in importing countries.

Currently, the prospects are for a world wheat crop this season well below the big harvests of 1939 and especially 1938 but only slightly less than the estimated annual consumption requirements. At the same time, world carry-over stocks of wheat have reached new record levels. Most of the expected reduction for 1940 is in the European wheat crop, notably the Danube Basin, France, the Low Countries, and to a certain extent Central and Northern Europe. Ordinarily this would result in a significant increase in wheat imports from the United States and other exporting countries. Whether or not the British blockade or various government trade policies will prevent an increase in wheat trade in unpredictable.

ada, Australia, and Argentina—almost monopolized the world trade in wheat, usually accounting for 85 to 90 percent or more of the total. On a quantity basis these countries furnished around 700 million bushels or more in most years. Of the total trade, Argentina usually accounted for 15 to 20 percent, Australia, 10 to 12 percent, Canada around 40 percent, and the United States, 20 to 25 percent. Other ex-

porters were the Danube Basin countries with about 5 percent, and India, North Africa and the U. S. S. R. with an average of 1 to 2 percent each. During the past decade, however, not only has the total volume of trade declined but the origin of the supplies has undergone some significant changes. In certain seasons, severe droughts or other crop damage have caused sharp fluctuations in the export movement.

THE principal shifts in trade have been due to the increasing importance of production in the Danube Basin, Russia, and French North Africa, and to local European surpluses. The share of trade for these countries has risen from some 7 to 10 percent a decade ago to 20 to 25 percent in recent years. The volume of trade for these countries has also increased despite the decreased volume of world trade.

Accordingly, the overseas countries as a group, and the United States in particular, have been forced to relinquish part of the trade developed during the war period and the decade of the 1920's. Australia and Argentina have fairly well maintained their volume and in turn somewhat increased their share of trade. Canada has had some reduction in volume but practically held its share, while the United States has had both a decreased volume and share of the world wheat trade in the past decade.

As regards imports, Europe continues the dominant factor with 75 to 80 percent of the total world trade in most seasons. Most of the decline in world trade has been due to a decline in European takings so that little change has occurred in the share of trade for Europe and non-European countries.

OF all developments in the wheat situation in the past 2 decades, the role of government policy has been in many ways the most significant. Government control and influence over wheat production and

trade have brought the wheat and flour industry in many countries to the virtual status of a "public utility" to be operated in accordance with the general welfare or national interest. The importance of bread in the diet of countless millions, of wheat growing in the world's agriculture, and of agriculture in the national economy of so many countries has tended to make wheat a key industry and as crises developed, government action has been taken.

The number and types of measures adopted with respect to wheat production and trade have shown a sharply increasing trend in most countries. Ominously perhaps, government action with respect to wheat has generally shown only one trend and that is increasing control and regulation. Many countries have already reached an advanced state of wheat monopolies with complete control of the industry. Production aids usually include fixed prices, or two-price systems, loans or benefit payments, mixing regulations, and improved seed distribution, while among the import restrictions may be mentioned exchange control, tariffs, license or import permit systems, milling and baking regulations and, as regards certain countries, clearing, barter or preferential agreements, and government deals.

The latter type of Government action has increased markedly in recent years and as a result there is the tendency toward the "channelization" of the world wheat trade. The larger the share of the world wheat trade that becomes "channelized" the smaller the amount of the free market. This development of course is not unfavorable for all countries—on the contrary for those exporters receiving preferential treatment via special tariffs, currency regulations, barter or otherwise, the wheat trade and industry is placed on a more or less stabilized basis with increases possible if the market permits. Among the exporting countries which have been enjoying preferential market

and trade conditions are those of the Danube Basin, the Near East, North Africa and at present also Russia, and the British Empire countries. In fact, the only important exporting country outside of the favored wheat market groupings today is the United States.

CERTAIN trends and developments stand out as likely to have an important effect on the world wheat trade and industry in the next several years. As regards the United States, perhaps the most significant development is the current trend toward "fixed" markets or "channelized" trade. This tendency seems likely to be further intensified by the present war in Europe, due in large measure to the foreign exchange situation in the various countries. Under such conditions, three alternatives present themselves: (1) An international wheat agreement which would allocate the trade among the exporting countries, (2) participation in "fixed" markets or "channelized" trade largely via special

government arrangements, barter, and the like and (3) withdrawal from the world wheat trade as an active or major exporter.

For the United States, and for most of the other exporting countries, alternatives 1 and 2 would probably require only little change in the domestic wheat industry, but alternative 3 would force a marked readjustment. Whether or not a satisfactory and workable wheat agreement can be negotiated after the present European War is problematical. Similarly, participation in "channelized" trade depends upon government policy and action which in certain cases at least is problematical. For some countries such action would be almost a reversal of present trade policy. It is not likely that the world wheat trade will soon return to a purely economic basis with price and quality again the chief market factors, regardless of who wins the European War.

GORDON P. BOALS.

Is Price Inflation Inevitable?

FARMERS and business men are well-acquainted with the effect of the first World War on prices. Prices of most farm products more than doubled. Land values shot up sharply, especially in the Corn Belt. Many other factors also contributed to farmers' economic ills since 1920. Even so, the memory of the acute troubles that grew out of the war price inflation cause very real concern about the difficulties that might follow from a new inflation period.

The outbreak of the second World War in September 1939, touched off an immediate speculative advance, both in commodity prices and in business activity. This advance was based on memories of the previous war inflation, rather than on any imme-

diately export orders. During the first quarter of 1940, it became apparent that war orders were not showing up in anything like the volume anticipated, and most prices and industrial production sagged back toward the August levels. Only where war interrupted supplies of imported products, or where bad weather was cutting into crop prospects, as with wheat, were the price advances maintained.

May and June of 1940, however, produced a new situation, with the warfare abroad flaming to "total war" intensity, and with the start of a great defense program in the United States running into billions of dollars. Industrial production, especially in steel, has again turned up. War and defense are dominating all business

plans. Do these recent developments indicate that a war price inflation is about to get under way?

THE situation today differs greatly from that which caused price inflation in the first World War. Three differences are outstanding:

- (1) The difference in the supply situation, especially with reference to farm products.
- (2) The difference in the way the war is being financed and supplied.
- (3) The difference in unused industrial productive capacity, both of equipment and men.

First, the changes in the supply situation are obvious to anyone who has followed the trends in world trade over recent years. Europe is far better able to feed herself today than in 1914. England has many other alternative sources of food imports which were not available then. World farm production has been outrunning consumption, and reserve stocks are unusually high. It is possible that only after one or two years of very destructive warfare Europe would have to turn to us for greatly increased purchases of farm products.

Second, the first World War was paid for largely by borrowing. We and the Allies met from 67 to 83 per cent of the total war expenditures from credit. Today, the English are doing everything they can to restrict civilian consumption and to pay for the war as they go. They are diverting buying power by heavy taxes and enforced savings. They are restricting consumption by rationing, by import quotas or embargoes, and by limiting the foreign exchange which can be used for food imports. Furthermore, by letting the pound depreciate in relation to the dollar, they are discouraging imports. Both directly and indirectly they are limiting purchases from the United States and are buying instead from other countries where they do not have to use dollar exchange. Farmers have already felt the impact of these policies in sharply reduced

exports of tobacco, wheat, fresh and dried fruits, and hog products. Instead of war demands driving up exports and dollar prices of farm products, as in 1914-19, exports of farm products are falling.

Finally, today we have abundant unused raw resources, many industrial plants idle or only partially active, and millions of workers looking for jobs. In 1914-15, on the contrary, our industrial capacity was pretty fully utilized. Increased demand today will act first to put more men at work and increase production. While there may be bottlenecks that will stiffen prices in particular products, there seems little reason why the price level as a whole should rise until our manpower and our equipment are much more fully utilized.

THE differences between the present situation and that of the first World War are shown graphically in the accompanying chart. The two upper sections show the liquidation of foreign-owned securities, and the sale of foreign bonds to private citizens here. These provided the funds for foreign purchases here in the early years of the first World War. After we entered the war, the federal government began to finance both our own armament and the Allies'.

The third section shows the way the Federal operations were financed. Expenditures (the top line) rose from 1 billion to more than 18 billion dollars. Receipts rose from about 1 billion to more than 5 billion. The difference (indicated by the black area) was covered by borrowing. In 1918-19, at the height of our war effort, the federal deficit was over 13 billion dollars.

The effect of these expenditures on industrial production is shown in the section next to the bottom. By 1916, our industry was already operating at full capacity, more than 10 percent above the long-time trend. Despite the tremendous expenditures of the subsequent years, the volume of output actually declined. Once we were

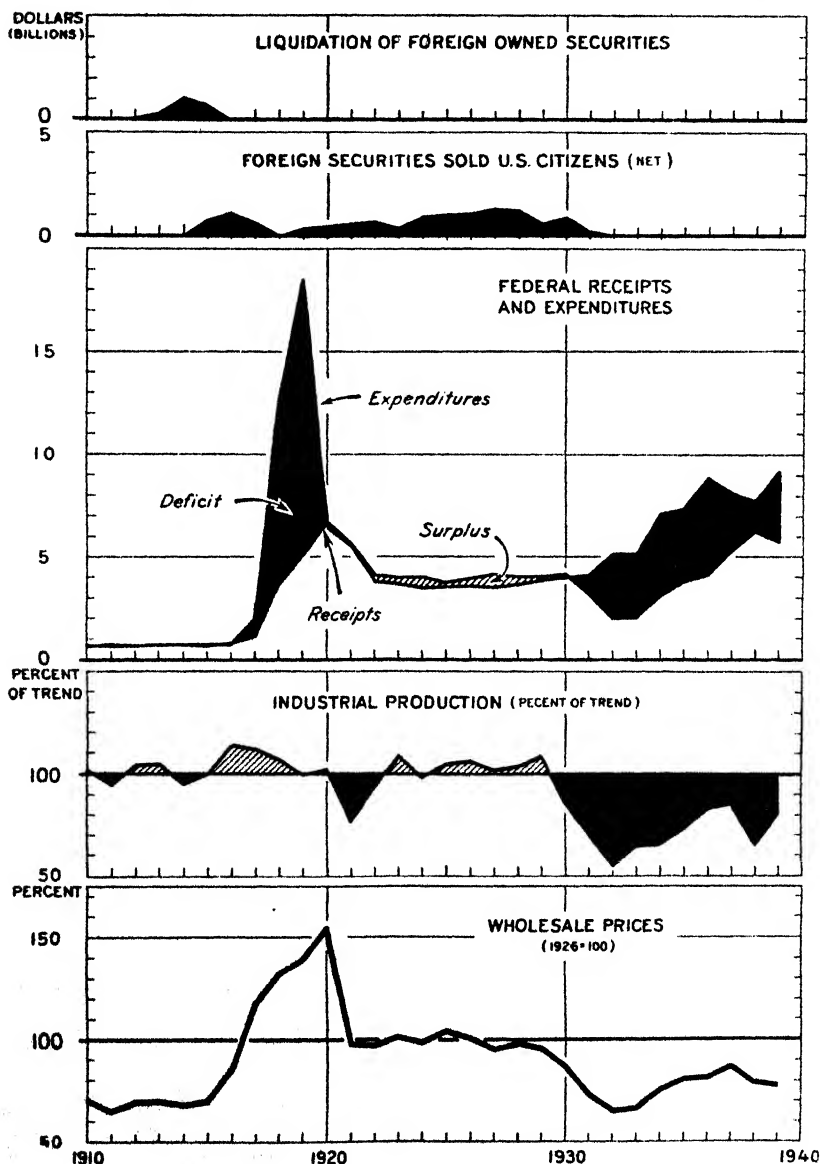
operating at full capacity, the pouring of more money into the demand had no further effect upon the quantity of goods produced.

When the great outpouring of funds could not drive up the quantity of goods produced, it drove up the price per unit instead. This is shown in the bottom section of the chart. By 1916,

wholesale prices were already rising as a result of the expenditures by the Allies. Thereafter prices more than doubled, as we dumped additional billions of dollars into the market.

WHEN great amounts of money are borrowed and spent after production is already running at full

HOW THE WAR AND RECOVERY WERE FINANCED IN THE U.S.A.



capacity, the effect is solely to push up prices. That is where our war price inflation came from. But when great amounts of money are borrowed and spent when there is great unused capacity, the effect on production and prices is entirely different. This is shown by the record for the years 1932 to 1939.

In those years, government expenditures again greatly exceeded receipts (except in 1938 when the deficit was sharply curtailed). Business activity at the beginning was down to almost half normal. The effect of the government expenditures was to increase industrial production greatly, while price levels rose only slightly. (Even this rise was due largely to other causes, such as the shift in gold values, droughts, and agricultural adjustment programs.) The cut in Government expenditures in 1938 was accompanied by a sharp drop in industrial production, and the resumption of expenditures in 1939 by a new production upturn, while price levels remained substantially unchanged. The spending of large amounts of borrowed funds when much productive capacity and many men were idle apparently increased production first, with little or no effect on price levels.

These facts indicate that so long as we have millions of men still unemployed, and much productive capacity unused, neither war demands nor defense expenditures are likely to result in any appreciable price inflation here. With approximately one-quarter of our industrial workers unemployed despite heavy deficit expenditures in recent years, it appears that defense expenditures would have to go up to many billions per year before they would generate either full employment or rising prices.

THE development of our new defense program is being accompanied by consideration of proposals for covering a considerable share of the new expenditures by sharply increased taxation, and for reducing expenditures on regular government activities. This would follow closely

the policies now in use in the belligerent countries.

The facts presented are also of interest with reference to these fiscal questions. These facts suggest that we could finance our defense program by borrowing for a considerable period ahead with little danger of inflation. We have great unused productive resources and millions of unemployed workers. If we should finance the defense program by borrowing, this would increase production and employment correspondingly. If we should finance it wholly by taxation and economy elsewhere, this would simply shift production from civilian needs to armament and munitions, without increasing employment or total production.¹

The more we depend on taxation or economy that falls on consumers, and the less we depend on borrowing, the more we will be creating our defense out of butter and clothes and automobiles that otherwise would be bought and consumed, and the less we will be getting it out of an increase in our total production. It would appear that we could finance the defense program largely out of borrowing until real labor shortage and rising prices warned that we were approaching full capacity. Then, and not till then, would be the time to curtail civilian consumption through higher taxes or other more direct measures.

The issues and problems in this field were strikingly summarized by Secretary Wallace in a recent radio talk.² He said:

¹ The relation is not quite so simple as stated. Some forms of taxes (such as direct commodity or sales taxes) fall largely on persons with low incomes, and reduce expenditures for consumption to the full extent of the tax. Other taxes (such as progressive income or inheritance taxes, or excess-profit taxes) fall largely on income that otherwise would be hoarded in idle savings, and so have relatively slight effect on consumption. If it were possible to increase those taxes that fall on hoarded savings, without increasing those taxes that reduce consumption, this would help finance the defense program without checking the employment or production generated by it.

² "The Defense of Our American Democracy," radio talk by Henry A. Wallace, June 4, 1940.

We have millions of men idle today, and great factories only partially utilized. By putting them at work, we can produce great quantities of tanks, airplanes, armaments, and munitions, without reducing our production of food, clothing, or other articles for civilian use. In the first world war, borrowing produced price inflation because we had no unused capacity to fall back on. Today, there is no danger of inflation so long as we have unused labor and plant capacity to put to work. We must be careful not to tax so heavily or so soon that we reduce civilian consumption while millions of men are still unemployed. We should not forget that even our present tax rates as modified by the President's recommendation will bring in vastly increased revenue to the government when more production and more jobs are created and business activity rises.

PPRICE inflation is not only not inevitable—it hardly seems even probable for a long time ahead. The price inflation of the previous war was due largely to lack of adequate comprehension of the forces which make prices and price levels. In the intervening decades there has been a great deal of experimentation in many countries with new methods of fiscal and financial control and a great development of instruments and agencies of knowledge and control.³ All of this past experience is being

³ Even such standard guides to economic policy as indexes of wholesale and retail prices (such as the B. L. S. index) and of industrial production (such as the F. R. B. index) were not available during the first World War.

drawn on today to ensure more effective results. The immediate danger here is not that we will produce inflation, but rather that our efforts to head off inflation will retard recovery and reemployment instead.

What happens to domestic industrial employment in the months and years ahead is of vital concern to farmers. Thus far, the war has greatly reduced their export outlets. New efforts are under way to move farm products abroad, such as through special sales to the Red Cross, or through barter for strategic industrial materials. Despite these efforts, the prospects for real improvement in farm exports are slim.

The only real hope farmers have for larger demand for their products lies in an improvement in industrial employment here, and in special action programs contributing to larger domestic consumption. Rising employment would increase the cities' buying power for farm products, and sustain or raise the prices of those products which depend on domestic markets. A severe problem would still remain in products which have been, or will be, particularly hard hit by the war, such as cotton, tobacco, raisins, and prunes. Even so, the influence of city buying power on farm prices and farm income is so great that our farmers will be vitally concerned with the effects of defense and defense financing on the employment and buying power of their city customers here at home.

MORDECAI EZEKIEL.

Credit.—Use of short-term production credit by farmers throughout the nation increased during the first 5 months of this year, according to the Farm Credit Administration. Loans outstanding at the end of May totaled 195 million dollars compared with 183 million on the same date last year. This represents an all-time high for the volume of loans outstanding from production credit associations to borrowing farmers. * * * The system of cooperative production credit for farmers was organized in 1934. Since then the production credit associations have made nearly 1.5 million loans aggregating more than 1.5 billion dollars.

Grass Silage in the Northeast

THE practice of making grass silage is becoming increasingly popular in the northeastern dairy region. Some farmers report that the ensiling of grasses and legumes is economical, that it saves money by saving the crop or at least a larger proportion of the crop. Some farmers believe that grass silage is a better feed than hay or corn silage. Some assert they can produce and feed grass silage more cheaply than corn silage.

The vagaries of weather are probably a basic reason for the development of the practice of making grass silage, because northeast farmers were complaining about extensive losses of hay crops in years when haying was bad. In New England, it is not at all unusual to have to barn hay that has been wet two or three times. The nutritive value is lowered; in addition, cows simply don't like the hay.

AFTER several years of experimentation, the experts have learned several things about grass silage. They have learned that it is not the cure-all for weather problems, because good grass silage needs wilting. Moreover, the whole process of cutting, loading, chopping, "molassesing," and ensiling is not simple. To find more specific answers the Bureau of Agricultural Economics and the New Jersey Experiment Station have made an intensive study of grass ensiling on 50 farms in northern New Jersey.

These 50 farms were large farms, averaging 50 cows. Only one-fifth had fewer than 30 cows. All were equipped with a tractor, a corn-silage or grass cutter, and a windrower attachment for the mower cutter-bar. Nearly all had a special grass loader or a hay loader. This meant an expensive investment in machinery for a small farm.

(From the standpoint of summer feeding, one needs to feed off grass

silage at the rate of about 3 inches daily.* At 40 pounds per cow daily this would require about 40 cows for a 14-foot diameter silo, or 20 cows for a 10-foot diameter silo.)

These 50 farms had an average of 124 acres in crops as follows:

	Acres	Production
Hay:		
Alfalfa.....	32	78 tons.
Other.....	14	21 tons.
Grass silage:		
Alfalfa.....	12	76 tons.
Soybeans.....	6	30 tons.
Grass, oats, etc.....	4	19 tons.
Corn:		
For silage.....	17	130 tons.
For grain.....	20	736 bushels.
Small grains.....	24	
Other crops.....	5	
Total crop acres.....	124	

* +13.5 first cutting for silage included above.

There are good reasons why dairy farmers in northern New Jersey have not abandoned corn for hay. Records of yields in New Jersey from 1880 to 1938 indicate that corn yields were low—10 percent or more below average—in 11 of those years. Hay yields were low in 14 of those years, but both crops were low only 4 years in the 59.

THE fact that hay crops for silage can usually be grown with less labor per acre than corn does not mean that the farms would give a greater net return if hay crop acreages were increased and corn acreages reduced. The hay crops and corn do not compete but rather supplement each other in the rotation. The best combination of these crops will vary with different soils, topography, and supply of labor during the season, but in this area a combination of these crops will generally produce a larger and more even supply of feed than either one alone.

Molasses bought for \$17 to \$20 per ton was used at the rate of 50 to 100 pounds per ton of grass silage by

nearly all of the farmers. At this price, the silage was probably an economical feed. On the other hand, molasses is not necessary to make good silage from alfalfa or any other crop. If a silage crop (except corn) contains as much as 70 percent of water when put into the silo there is likely to be considerable leakage from the silo. This results in a loss of the most soluble nutrients. If the crop has 50 to 65 percent water when ensiled, is cut fine ($\frac{1}{4}$ -inch lengths), is well packed and sealed with 3 feet of very green material on top, there will be no leakage and the quality will be good with or without molasses. This has been tried out many times in various parts of the United States by farmers, agricultural experiment stations, and by the Bureau of Dairy Industry during the past 50 years.

Under usual farm conditions, where 2 or 3 men are putting up grass silage, as much is cut down in the morning as can be ensiled that forenoon or the rest of the day. Consequently, there is enough drying to prevent leakage and spoiling of the silage. However, if a silo is filled in the belief that hay can be made in the rain there is likely to be a cracked silo, odorless silage juice in the barnyard, and a rank-smelling grass silage that will not be relished by the cows.

THE labor in putting up a ton of dry matter in grass silage is greater than for a ton of dry matter in hay, but unless the weather is ideal for haying, the crop can be put up in a shorter period if some of it is ensiled. Grass silage also requires more tractor work than hay per ton of dry matter.

There was no exchange of labor and equipment between the farms in New Jersey in putting up grass silage as there usually is between smaller farms in putting up corn silage. Putting up the hay crop has practically always been an individual farm job to be hustled along whenever the weather permitted. With a larger proportion of the days in haying time suitable for ensiling crops than for haying, it seems as though one farmer owning a tractor and a silage or grass cutter could fill 3 to 6 silos in a neighborhood during the usual haying season to the benefit of all cooperating farms. At present, the farmers putting up grass silage are usually too far apart to make such exchange practicable.

No doubt the use of grass silage will increase considerably on the dairy farms in the Northeast. If some exchange of help and equipment could be worked out its use could be extended to many more of the farms with fewer than 30 cows.

EMIL RAUCHENSTEIN.

Garbage Feeding of Hogs

A SORT of "fringe" agricultural industry has grown up in this country, the extent of which is little known. It is the garbage feeding of hogs. It flourishes especially in the more populous States and in the vicinity of the large cities.

With the cooperation of the Extension Service an effort has been made to find out just how extensive this industry is. The county agricultural agents, excepting in certain plains and mountain areas, were queried about the matter. Reports

have been received from 1,524 counties. Virtually every county agent knows who the large feeders are, if there are any in his county, and can give a fairly good estimate of the number of hogs annually fed and sold.

THE reports so far tabulated show 1,047,000 garbage-fed hogs being marketed annually in this country. When allowance is made for certain counties for which reports are not yet complete, it is probable that the total number of garbage-fed hogs in the

country runs to more than a million and a quarter head a year. About half of these are said to be fed exclusively on garbage, while the other half may be fed some grain for finishing. Some, but not a large percentage, are marketed as feeder pigs.

Approximately 2,800 garbage feeding establishments have been listed, each feeding 100 head or more of hogs. The States showing the largest number of such feeders are Indiana 339, California 329, Massachusetts 315, New York 272, Virginia 145, New Jersey 123, and Missouri 103.

The large centers of garbage feeding are on the Atlantic and Pacific Coasts, especially in the vicinity of New York and Los Angeles. The largest single feeding establishment is reported from California, this one carrying around 60,000 hogs. There are numerous garbage feeders in that State having from 1,000 to 6,000 head apiece.

Of the total number of garbage fed hogs, about 401,000 head or 39 percent are sold yearly to local butchers. The great majority of feeders do not themselves slaughter and sell pork. Yet there were 167 counties reporting some such slaughter and sale by feeders themselves. It is indicated that the number of hogs annually so slaughtered and sold as pork by the feeders totals 43,000.

To the question "Do feeders pay for

garbage?" the replies from 139 counties were "yes" and 621 "no".

THE question was asked "Has any outbreak of disease, either swine or human, ever occurred in your county which was associated with this garbage feeding?". The replies to this question were 207 "yes" and 603 "no" but it may be noted that these answers were made from the general knowledge of the agents and do not represent exact or quantitative findings of health authorities. The States showing the largest number of affirmative answers to the disease question were California, Virginia, Oregon, West Virginia, New York, and Mississippi. Most of the disease reports are of hog cholera, with a sprinkling of various other hog diseases, and scattered cases of trichinosis.

The reports indicate that in some States this garbage feeding industry is a growing enterprise, as in California, Virginia, West Virginia, and Louisiana. States in which it is said to be a declining enterprise are Alabama, Indiana, Kansas, Mississippi, Nebraska, New York, New Jersey, and Pennsylvania. The total number of hogs being fed and marketed annually appears to be increasing, though it probably fluctuates somewhat with hog prices and market conditions.

A. B. GENUNG.

Canned Fruits and Vegetables and the War

WAR in Europe resulted in some expansion in exports of canned fruits and vegetables from the United States in contrast to the opposite effect on exports of most other agricultural commodities during the season now coming to a close. The effect of the war on exports of canned goods is not clearly defined, however, since the trend with respect to the individual commodities was affected also by the

current supply situation as to individual commodities. For this reason shifts in exports during the current season were mixed. There were increases over the corresponding period a year earlier in exports of canned grapefruit, apricots, prunes, fruit salad, pineapple, beans with pork, peas, tomato products, and soups. There were decreases in the exports of canned peaches, pears, asparagus and corn.

EXPORT markets normally take about 291 million pounds or 14 percent of the total United States pack of canned fruits, but only about 40 million pounds or 1 percent of the pack of canned vegetables including beans with pork, and soups. Canned apples, apricots, peaches, pears, pineapple, fruit salad, and grapefruit are the important canned fruit items exported; canned asparagus, beans with pork, corn, peas and tomato products are usually the important canned vegetable items. This season through April, exports of all canned fruits combined totaled 327 million pounds compared with 313 million pounds during the corresponding period a year earlier. An increase of 13 million pounds in the export of canned grapefruit about offset a decrease of 3 million pounds in canned peaches and 11 million pounds in canned pears. The net increase in total exports was in canned fruit salads and miscellaneous canned fruits.

Exports of all canned vegetables totaled 83 million pounds during the current season through April, compared with 33 million pounds a year earlier. The increase this season was largely the result of sharp increases in the export of beans with pork, soups and tomato products. Exports of canned beans with pork total 32 million pounds compared with only a little over 4 million a year earlier. Exports of canned soups totaled 13 million pounds or about double that of a year earlier and those of tomato products totaled 20 million pounds compared with only 7 million in the previous period. Exports of asparagus were decreased sharply.

AS a general rule about 85 percent of the exports of canned fruits goes to the United Kingdom and about 10 percent goes to the other countries of Europe. The remaining 5 percent is distributed among a large number of countries scattered throughout the world. During the current season ex-

ports to the United Kingdom have been well maintained and no special effort was made by the British Government to control imports of these products until March 1940. At that time, however, all canned fruits were placed under the import license control system. This act does not necessarily mean that imports are to be curtailed indefinitely but it does indicate that they are going to be regulated. It was reported in March when the shift in policy became effective that stocks of canned fruits in Great Britain had become large and were sufficient for consumption requirements for some time. It is now a matter of conjecture as to when imports will be allowed to flow freely again.

Other considerations likely to have an important influence on United Kingdom imports of canned fruits are questions of exchange control and the availability of shipping space. At the present time the movement of war materials from the United States to Great Britain is the most pressing problem. It is conceivable, however, that, with the spread of the war to the Mediterranean areas, exports of canned fruits from the United States to the United Kingdom may become active again sometime during the coming marketing season. It is doubtful, however, if any exports of these goods will go to other European countries.

THE United Kingdom usually takes about one-third of the exports of canned vegetables and the remainder goes in small lots to numerous countries located in all parts of the world. During the current season the United Kingdom stepped up the imports of beans with pork, tomato products, and soups but decreased the takings of other kinds of canned vegetables. These commodities have been considered as necessities and excellent foods for war time conditions. All these products have been placed under the import license control system along with all food products, and the quantity taken since that action has de-

clined. It is probable, therefore, that exports of canned vegetables from the United States during the coming season will not be as great as in the current season. The situation could change quickly, however, if exchange and credit conditions are improved and adequate shipping space becomes available. Unless prices of the products rise appreciably exports to areas other than Europe probably will continue on a normal basis.

The supply situation in this country during the coming season will also have an important influence on the

export movement. At present it appears that there will be ample raw materials for normal packs of canned fruits, except apricots. The vegetable packs probably will be increased somewhat if yields are average or better, since the planted acreage of most items is indicated to be increased over that of 1939. The carryover of canned vegetables probably will be somewhat smaller than a year earlier, however, and the increased packs probably will no more than offset these decreases.

GUSTAVE BURMEISTER.

Two Years of Crop Insurance

THIS summer the wheat growers are harvesting the second crop for which "all-risk" insurance has been available from the Federal Crop Insurance Corporation. Since its introduction on the 1939 crop, when 166,000 insurance contracts were completed by farmers, the new program has gained rapidly in scope. In 1940, the number of contracts in force increased 128 percent to 379,500, under which farmers are guaranteed income from 106,477,000 bushels of production on 11,300,000 acres in 33 States. To obtain this guarantee—75 percent of the average yield of the insured acres—producers paid into the insurance reserves of the Corporation premiums amounting to 14,807,000 bushels of wheat.

The increased interest of growers in insuring their wheat yields was general over the Wheat Belt, with sizable growth in the number of contracts reported from all but two of the States where the insurance was written. Greatest increases came in the winter Wheat Belt, where nearly three times as many growers paid premiums as in 1939; 310,000 in 1940 as compared to 107,000 in 1939. In the spring Wheat Belt, the increase was from 59,000 con-

tracts in 1939 to 69,000 in 1940. The greater increase in the winter Wheat Belt is attributed to the fact that last year spring wheat growers were able to utilize ACP advances to pay premiums, while winter wheat growers signed up before these were available. Consequently, 1939 brought a higher percentage of sign-up in spring areas, and doubtless some of the 1940 increase in the winter Wheat Belt represents growers who would have insured last year, had they been able to finance premiums.

THE distribution of the insurance on the 1940 crop adds further evidence to the effectiveness of gearing the insurable yields and the premium rates to conditions on the individual farm. There has been no marked tendency for the insurance to be limited to either low-risk or high-risk areas. In general, distribution of contracts follows the normal spread of wheat acreage. In the major winter Wheat Belt, Kansas and Nebraska lead in number of contracts with 60,500 and 57,240, respectively. In the soft winter Wheat Belt, the most contracts are in Ohio with 28,700, Indiana with 28,300, and

Illinois with 14,800. In the spring wheat area, North Dakota, South Dakota, and Minnesota have the largest participation with 31,600, 21,000, and 21,000 contracts, respectively.

More small farms have been brought into the program in 1940, according to figures which show that while the total number of contracts increased by 128 percent over 1939, the insured acreage increased only 56 percent.

AT the present time the adjustment of early 1940 losses is underway with county AAA committees responsible for inspection of damaged or destroyed fields. Where the crop has been totally destroyed the settlement is simple, since the farmer is entitled to the full guaranteed production. Where the crop has been damaged so badly that it is not practicable to carry it to harvest, the potential yield is appraised, and the farmer may claim an indemnity for the net loss. Where the damage is not sufficient to be considered "substantially" total, the final adjustment is made at harvest after the actual yield has been determined.

An important improvement in the settlement of 1940 losses is the option by which a grower can request a "deferred" settlement. Under this option a grower can ask that a cash equivalent payment be deferred up to 90 days, to be made on notice by the grower. When payment is requested, the cash value of the indemnity is computed on the price quotations of the day the notice is received by the Corporation. The deferred settlement option could be of great value to growers in the case of a rising market, yet makes no difference in the liability of the Corporation, since grain for the indemnity is sold from the reserves the day the settlement is computed.

The Corporation also has endeavored in 1940 to locate its wheat reserves as close to the points where indemnities

will be paid as possible, and to obtain a good supply of "flat" wheat—that is, wheat which is free of freight charges—in order that it might pay indemnities "in kind" where desired by the grower. The 14,807,000 bushels of reserve are stored at 102 locations in 16 States. About 1,765,000 bushels of this reserve are "flat" wheat.

INSURANCE on the crop planted for 1941 will be written shortly after the current harvest. Except for a few minor administrative changes to promote more "direct-line" operation, the plan is the same as in 1940. All yields and rates have been revised in line with the established policy of rechecking the rate structure annually and bringing into the base period the latest available yield and loss figures for the farm. For the past few months county and State committees have been reworking the data for all farms, adding to the actuarial base the actual yields recorded for the farms in 1939.

The timing of the program has been speeded up two weeks to a month in the winter Wheat Belt by establishing a single closing date, August 31, for acceptance of farmers' applications. To insure yields, growers must apply for a contract and pay the premium before the crop is seeded and in no case later than the closing date. This earlier closing date means that all growers must decide whether or not they will insure before crop conditions can become a factor, thus placing all growers on an equal footing, and guarding against adverse selection of risks. In the spring Wheat Belt the closing date is February 28, 1941, a date that has been found to be sufficiently in advance of planting time.

As wheat crop insurances goes into its third season, an intangible and yet extremely important factor is the past experience that has been gained

with this new economic device, and the fact that whereas crop insurance started in 1939 from "scratch" there is now a corps of farmer-workers in State and county committees who are

thoroughly familiar with the principles behind the insurance and the technique of administering such a program.

JOHN A. BIRD,
Federal Crop Insurance Corporation.

Production, Slaughter of Meat Animals

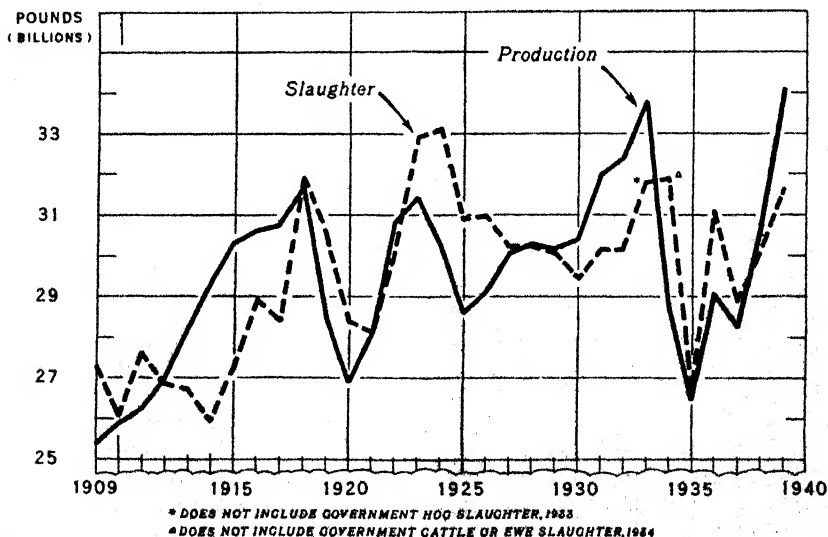
ESTIMATES of production and of total slaughter of meat animals, both in terms of liveweight, are now available for the 31-year period, 1909 to 1939. The accompanying chart shows these figures for this period. The yearly average of both production and slaughter over this period is about 29.5 billion pounds, with production varying from about 25 billion to 34 billion, and slaughter from about 26 billion to 33 billion. However, if the weight of cattle and sheep bought and disposed of by the Government in 1934, were added to the slaughter of that year, the peak of slaughter would have been about 36 billion.

From 1909 to 1918, production increased steadily and at a rather rapid rate. Most of this increase was in

cattle, although the trend of hog production was upward during this time. With both species, the high World War level of prices was an important factor causing the increases. This increased production was not reflected in slaughter until 1916. However, slaughter did not overtake production until 1918, and the total volume of slaughter during this period was much below production as cattle supplies accumulated.

WITH the post-war decline in prices, both slaughter and production declined, but slaughter exceeded production. After 2 years, however, production started upward again rather rapidly, reflecting largely the increase in hog production.

PRODUCTION AND SLAUGHTER OF MEAT ANIMALS
(LIVE WEIGHT BASIS)



Slaughter started upward a year later and again exceeded production in 1923 and for the years following until about 1928, as heavy cattle slaughter used up the accumulation of the war years.

From 1925 to 1933, production was rather steadily upward, with increased hog and sheep production more than offsetting decreased cattle production until 1928. After that year a rapidly increasing cattle production was added to a continuing high level of hog and sheep production. Slaughter continued to decline from 1928 through 1930 and then advanced until 1933, but was much smaller than production.

PRODUCTION of meat animals was drastically reduced in 1934 and 1935 as a result of the 1934 drought. But from the low point of 1935 it recovered rapidly, with a temporary set

back in 1937, to reach an all-time peak in 1939, with each species at a high level. Slaughter continued to increase in 1934 and would have been the largest on record had the weight of cattle and sheep purchased by the Government and disposed of in that year been added to the total slaughter. Changes in slaughter followed changes in production from 1935 through 1939 with the total above production in the first 3 of these years but below it in 1938 and 1939.

With production at a peak in 1939, it is to be expected that slaughter will continue to increase and that a new peak will be formed in the next few years. After 1940 or 1941, slaughter may again exceed production.

C. L. HARLAN,
Agricultural Marketing Service

**UNITED STATES: Exports and Imports of Specified Agricultural Commodities,
May, 1939 and 1940, and September-May, 1938-39 and 1939-40 ¹**

Commodity	Unit	May		September-May	
		1939	1940	1938-39	1939-40
Exports:					
Pork:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Cured pork ²	Lb.....	7,736	1,495	51,916	42,381
Other pork ³	Lb.....	3,951	2,280	28,473	67,780
Total pork.....	Lb.....	11,687	3,775	80,389	110,161
Lard, including neutral.....	Lb.....	26,303	14,889	193,064	195,921
Wheat, including flour.....	Bu.....	14,489	2,239	84,553	36,234
Apples, fresh ⁴	Bu.....	396	79	11,558	2,796
Pears, fresh.....	Lb.....	300	427	131,451	64,455
Tobacco, leaf.....	Lb.....	22,400	30,287	385,952	254,577
Cotton, excluding linters (500 pounds).....	Bale.....	149	238	3,068	6,018
Imports:					
Cattle.....	No.....	63	87	614	505
Beef, canned, incl. corned.....	Lb.....	11,281	9,079	59,657	62,446
Hides and skins ⁵	Lb.....	26,805	23,652	227,175	241,793
Barley malt.....	Lb.....	12,649	4,327	76,156	49,416
Sugar, cane (2,000 pounds).....	Ton.....	206	301	1,652	2,371
Flaxseed.....	Bu.....	1,155	1,434	14,728	11,056
Tobacco, leaf.....	Lb.....	6,514	5,858	43,605	46,395
Wool, excl. free in bond for use in carpets, etc.....	Lb.....	7,327	10,222	52,550	139,677

¹ Corrected to June 24, 1940.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled or salted, and canned pork.

⁴ Includes baskets, boxes, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records of the Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1923- 25=100) ¹	Income of industrial workers (1924- 29=100) ²	Cost of living (1924- 29=100) ³	(1910-14=100)					Taxes ⁴
				Whole- sale prices of all commod- ities ⁵	Prices paid by farmers for commodities used in—			Farm wages	
					Living	Pro- duc- tion	Living and produc- tion		
1925	104	98	101	151	164	147	157	176	270
1926	108	102	102	146	162	146	155	179	271
1927	106	100	100	139	159	145	153	179	277
1928	111	100	99	141	160	148	155	179	279
1929	119	107	99	139	158	147	153	180	281
1930	96	88	96	126	148	140	145	167	277
1931	81	67	88	107	126	122	124	180	253
1932	64	46	79	95	108	107	107	96	219
1933	76	48	76	96	109	108	109	85	187
1934	79	61	78	109	122	125	123	95	178
1935	90	69	80	117	124	126	126	108	180
1936	105	80	81	118	122	126	124	111	182
1937	110	94	84	126	128	135	130	126	187
1938	86	73	82	115	123	124	122	124	186
1939	105	83	82	113	120	122	121	124	
1939—June	98	80	81	110	119	121	120		
July	101	80	81	110			120	126	
August	103	83	81	109			119		
September	111	80	82	115	122	123	122		
October	121	91	82	116			122	126	
November	124	93	82	116			122		
December	128	93	82	116	121	124	122		
1940—January	119	93	82	116			122	119	
February	109	89	82	115			122		
March	104	87	82	114	121	125	123		
April	102	86	82	115			123	124	
May	105	87	82	114			123		
June ⁶				113			123		

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio of prices re- ceived to prices paid	
	Grains	Cotton and cotton- seed	Fruits	Truck crops	Meat ani- mals	Dairy prod- ucts	Chick- ens and eggs		All groups
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	153	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	74
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1939—June	73	73	93	105	107	94	83	89	74
July	66	73	80	99	107	96	89	80	74
August	64	71	70	99	101	100	90	83	74
September	83	76	73	117	117	107	102	96	80
October	77	74	73	128	112	112	108	97	80
November	79	75	66	123	107	117	117	97	80
December	87	82	65	96	101	118	97	96	79
1940—January	90	85	66	117	103	119	91	99	81
February	91	85	76	108	101	118	98	101	83
March	92	85	73	128	102	114	83	97	79
April	90	85	81	145	104	110	82	95	80
May	92	83	88	133	108	106	84	98	80
June	83	81	104	134	102	104	81	95	77

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1925=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real-estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE: The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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LOOK FOR A BETTER DOMESTIC DEMAND for farm products during the last half of this year compared with last. No boom, no runaway prices. Simply a sound improvement based upon an expected increase in industrial production stimulated by national defense programs. All farm commodities—for immediate consumption and for reserve—are in plentiful supply. Trouble is that surpluses in some basic commodities may pile up here as result of diminished exports to Europe. New market outlets must be found if production is to be continued at current levels. Besides the increases expected from continued economic recovery, the Federal Government is trying to raise domestic consumption by means of the Food Stamp Plan, Cotton Stamp Plan, school lunch, new industrial uses, and other programs. * * * Prices of farm products and cash farm income are higher this summer than last. Income for the full year 1940 probably will be larger than in 1939.

Commodity Reviews

DEMAND: Improving

IMPROVEMENT in business conditions affecting the domestic demand for farm products continued into July. But as the month progressed industrial gains became more moderate.

Expansion of industrial output since April has been accompanied by a rise in industrial employment and pay rolls. Even though the greater part of the present rise in output may now be over, the effect of increases to date should be reflected by further gains in employment and pay rolls, in distribution, service, and other secondary lines. This means some additional improvement in the domestic demand for farm products even if industrial production levels off for awhile.

The longer-time outlook for domestic demand is dependent in large measure upon the ability of the major opponents in the European war to continue the fight and the rapidity with which our own huge defense program gets into full operation. Any sudden end to the European war, prior to a considerable increase in actual spending and production for national defense, might find business unable to withstand the loss of export orders which such a development would cause. If the bulk of British orders for military equipment were quickly taken over by our Government, the effects on domestic industry might not be serious, but otherwise the shock to business sentiment might well lead to widespread revision of inventory policies and cause trouble for a few months.

Industrial activity was rushed upward late in 1939 in part because inventories of both manufacturers and distributors were rapidly expanded after war started in Europe. Since this period of inventory-building, continental European markets have been cut off so that the possible war-inspired price rise against which business was

preparing has become less probable. Under these circumstances an early end to the war might induce enough inventory liquidation to bring a relapse in the industrial conditions which affect the domestic demand for farm products, before our defense program matures sufficiently to prevent it.—

P. H. BOLLINGER.

EXPORTS: Dwindling

Spread of the European war area has been accompanied by the progressive closing of foreign markets to United States farm products. Continental European markets which have now been closed furnished in recent years an outlet for approximately one-third of our total farm product exports. The remainder was about evenly divided between the United Kingdom and all other countries.

Effects of the loss of continental European markets, in particular, and of other war-time interruptions and trade controls, on exports of individual farm commodities were especially noticeable in the statistics for May and June. Canned and dried fruit exports were reduced to a trickle during this period. Exports of pork products were only about one-fourth as large as they were a year earlier. Soybean exports, formerly going largely to Scandinavia and the low countries of Europe, have practically stopped.

The loss of foreign markets for United States agricultural products will, in general, continue for the duration of the war, although stoppage of supplies of certain competitive products formerly exported from continental Europe may later result in revival of some export demand for them. For instance, closing of the Mediterranean area may eventually lead to some increase in export demand for dried and canned fruits and vegetables; the same might be said

concerning possible diversion of British pork purchases to the United States through the closing of former European sources of supply. Evaporated milk exports have already felt the impetus of smaller competitive supplies in Europe. On the whole, the outlook for farm product exports is highly unsatisfactory—particularly for cotton, our most important export commodity.—P. H. B.

Index Numbers of Prices Received and Paid by Farmers

[1910-14 = 100]

Year and month	Prices received	Prices paid	Buying power of farm products
1939			
July	89	120	74
August	88	119	74
September	98	122	80
October	97	122	80
November	97	122	80
December	96	122	79
1940			
January	99	122	81
February	101	122	83
March	97	123	79
April	98	123	80
May	98	123	80
June	95	123	77
July	95	122	74

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	July average 1910-14	July 1939	June 1940	July 1940	Parity price, July 1940
Cotton, pound	12.4	12.7	8.77	9.54	9.54	15.75
Corn, bushel	64.2	70.1	47.8	63.5	63.1	81.5
Wheat, bushel	88.4	86.2	55.7	67.4	61.4	112.3
Hay, ton	11.87	11.78	6.76	7.71	7.10	15.07
Potatoes, bushel	69.7	81.5	75.3	85.7	82.1	86.5
Oats, bushel	39.9	40.9	26.5	32.7	28.3	50.7
Soybeans, bushel	(¹)	(¹)	74.7	78.6	73.2	173.0
Peanuts, pound	4.8	5.1	3.4	3.5	3.4	6.1
Beef cattle, hundredweight	5.21	5.33	6.66	7.10	7.26	6.62
Hogs, hundredweight	7.22	7.25	6.26	4.82	5.78	9.17
Chickens, pound	11.4	12.2	13.7	13.3	13.6	14.5
Eggs, dozen	21.5	16.7	18.5	14.4	16.4	22.9
Butterfat, pound	26.3	23.5	22.0	25.6	25.9	31.1
Wool, pound	18.3	17.5	21.8	28.6	27.9	23.2
Veal calves, hundredweight	6.75	6.74	8.11	8.46	8.56	8.57
Lambs, hundredweight	5.87	6.09	7.31	8.12	7.85	7.46
Horses, each	136.60	136.30	80.20	75.00	74.50	173.50

¹ Prices not available.

² Revised.

³ Adjusted for seasonality.

COTTON: Prices Decline

Following the advance of about one-third cent in domestic spot prices from the third week of May to the third week of June, there was a slow but steady decline for the next 6 weeks. The average price of middling 15/16s in the 10 markets on July 31 of 10.25 cents was one-half cent below the high reached June 19. It was, however, nine-tenths cent above the low point of May, but with the exception of May was lower than the average for any month since last November.

In 3 of the 6 weeks ended July 25 domestic exports were 18 to 41 percent smaller than a year earlier. For the week ended July 11 exports were probably the lowest of any week since the beginning of the World War in 1914. In 2 of these 6 weeks, however, exports were approximately three-fourths or more larger than a year earlier, and not greatly different from those in the comparable period of 1938, despite the almost complete cessation of exports to continental Europe. From August 1 to July 25 total exports of 6,097,000 bales were 83 percent larger than to the corresponding date in 1939.

Domestic cotton mill activity seasonally adjusted appears to have increased during late June and early July. Domestic mill consumption now seems likely to approximate 7½ million bales, including about 130,000 bales of imported cotton. In 1938-39 the total was 6,858,000 bales, including 122,000 bales of foreign cotton.

British cotton mill activity continued high during recent weeks despite some decline. Goods for military and civil defense purposes constitute an unusually large portion of the output. In continental Europe and the Orient cotton consumption apparently has declined further during recent weeks.—MAURICE R. COOPER.

INCOME: Higher

Income from farm marketings in July probably increased by at least

the amount which is usual for the season despite sharp declines in prices of fruit and truck crops and somewhat lower prices for grains and lambs. Factors contributing to the rise in income included large gains in marketings of grains, fruits, and vegetables, a steep rise in hog prices, and some gain in prices of dairy and poultry products.

Farmers' cash income from marketings and Government payments in the first half of 1940 was 8.3 percent (292 million dollars) more than in the first 6 months of 1939. The total was 3,824 million dollars in 1940 as compared with 3,532 million in 1939. Higher income was realized from the sale of both crops and livestock. Government payments were about 1 percent less than in 1939. Gains in income were especially large for the grain, tobacco, and dairy groups of products, although some increase was realized from sales in all the major groups.

The better consumer demand which is developing has been accompanied by substantial improvement in hog prices. Better consumer demand undoubtedly has also been a factor in preventing even larger declines in fruit and vegetable prices as marketings rebounded from the period of sharp curtailment induced by weather damage earlier in the season.

The following table shows income for June and cumulative totals for the January-June period of recent years:

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
June:			
1940.....	562	25	587
1939.....	531	52	583
1938.....	551	45	596
January-June:			
1940.....	3,414	410	3,824
1939.....	3,118	414	3,532
1938.....	3,190	257	3,447

—P. H. B.

WHEAT: 1940 Supplies

The domestic wheat supply for the 1940-41 season still seems likely to be about 1 billion bushels, about the same as for the season ended June 30. An increase this year of about 26 million bushels in the carry-over on July 1 about offsets the indicated decrease in the current crop. Production of winter wheat was estimated at 524 million bushels on July 1, while that for all spring wheat, on the basis of July 1 condition, was indicated at 205 million bushels.

With domestic utilization of wheat in the new marketing season expected to approximate 675 million bushels, the supply available for export and carry-over would be about 335 million bushels, or about the same as a year ago. Export prospects for 1940-41 are very uncertain. Exports in 1939-40 were about 46 million bushels.

World wheat supplies may be 100 to 200 million bushels smaller than a year earlier, when they totaled about 5,460 million bushels. The current crop may be less than consumption, which would reduce the world carry-over of wheat a year hence.—

R. E. Post.

TOBACCO: Stocks Heavy

The 1940-41 marketing season for flue-cured tobacco opened this month with record stocks of around 1,410 million pounds, about 465 million pounds more than a year earlier. Indicated production as of July 1, however, is about 480 million pounds below the record 1939 production of 1,159 million pounds. Thus, the flue-cured supply at the beginning of the 1940-41 marketing season will be practically the same as that at the beginning of the 1939-40 season—more than 2 billion pounds.

The fire-cured and dark air-cured supply at the beginning of the 1940-41 marketing season probably will not be greatly different from that of 1939-40, when it was well in line with the dis-

appearance of recent years. Exports in 1939-40 will probably show a reduction of about one-fourth, but around 13 million pounds of fire-cured are owned and held in the United States by foreign agencies.

The smaller crop of Burley in 1940 will result in a supply about the same as in the 1939-40 season. Burley is a small export type and, therefore, not greatly affected by the reduced export outlets. The 1940 crop of Maryland tobacco is expected to be about 5.5 million pounds below the 1939 crop. This reduction in production apparently will more than offset probable decreases in exports.

The prospect for some increase in consumer incomes is expected to result in a moderate increase in consumption of cigarettes and cigars in 1940-41.—CLAUDIA THOMSON.

FEED: Supplies Ample

Stocks of feed grains on hand and growing conditions July 1 indicated a 1940-41 corn supply of about 3.0 to 3.1 billion bushels, an oat supply of about 1,178 million bushels, and a barley supply of about 347 million bushels. If the grain sorghums crop is about average, the total supply of feed grains for 1940-41 will be 116 million tons. This would compare with 118 million tons last year, but with the exception of last year would be the largest supply since 1932-33. The number of grain-consuming animal units on farms is expected to decline during 1940 so that the supply of feed per animal may be a little larger than last year's liberal supply. Excluding corn under seal on October 1, however, the supply per animal would be somewhat smaller than last year, and also below the 1928-32 average.

If July 1 indications materialize, the 1940-41 hay supply will total 105 million tons, which would be the largest since 1927. Pasture conditions have improved substantially during the past 2 months, and early in July

they were somewhat better than on July 1, 1939, and much better than the July 1, 1929-38 average.

Recent declines in oats and barley prices have been accompanied by comparatively steady corn prices. Consequently the price of corn in much of the mid-western feeding area is now high relative to prices of oats and barley, in contrast to relatively low-priced corn during much of the 1939-40 marketing year. Oat and barley prices probably will remain relatively lower than corn prices during the next few months.

Very little corn will be exported during the next few months, except what is exported through the present Government export subsidy program. It is estimated that half of the 25 million bushels sold under this program has been exported and the remainder is scheduled to be exported before October 1.—MALCOLM CLOUGH.

IIOGS: Supplies Smaller

The 8 percent decrease in the 1940 spring pig crop and the prospective decrease of about 12 percent in the number of sows to farrow this fall indicate that hog marketings in the coming marketing year, which begins next October 1, will be substantially smaller than in the current marketing year. Market supplies of hogs available for inspected slaughter in 1940-41 are expected to be around 10 percent smaller than the supplies of about 48 million head this year (1939-40).

Although there is little prospect for improvement in the export demand for pork and lard, present indications are that the demand on the part of domestic consumers for meats and lard will be well maintained in 1940-41. This, together with the reduction in marketings, should result in higher average prices for hogs in 1940-41 than 1939-40. The average price of hogs being received by farmers in the 1939-40 marketing year (October-September) is about \$5.50.

A large part of the decrease in hog marketings in 1940-41 from a year

earlier probably will occur after November or December 1940. With corn prices high in relation to hog prices many farmers will market spring pigs early and a larger than usual proportion of the spring pig crop probably will be marketed before January 1.

Hog prices advanced sharply in late June and early July, after declining steadily during May and most of June. In early July, the top price of hogs at Chicago reached \$7, the highest level since last November. This rise in hog prices reflected chiefly a seasonal decrease in market supplies, some improvement in domestic consumer demand for meats, relatively large purchases of pork and lard for relief purposes by the Federal Government, and prospects for a decrease in hog marketings next year. After August hog marketings will increase seasonally but the increase in marketings from September through December probably will be no larger and may be smaller than the increase during the corresponding period of last year.—

PRESTON RICHARDS.

CATTLE: Outlook

The most important features in the cattle outlook for the last half of 1940 are the prospects for about the same or slightly smaller total marketings of cattle for slaughter and a stronger consumer demand for meats than in the last half of 1939. The general level of prices of slaughter cattle in the last 6 months of this year probably will be higher than a year earlier, but prices of stocker and feeder cattle may not be greatly different from those of last year.

Marketings of cows and heifers will continue materially smaller than a year earlier during the remainder of 1940. Feed and pasture conditions of most areas are reasonably favorable and the tendency to hold back breeding stock to increase cattle numbers, which has been pronounced in the past year, will continue. The movement of stocker and feeder cattle into the Corn Belt

in the past 6 months has been somewhat smaller than a year earlier. This and other information indicate that the number of cattle placed on feed in recent months has been smaller than in the corresponding period of last year. Thus, while the number of cattle on feed is expected to continue large, the number fed during the last half of 1940 may be no larger than in the last half of 1939.

After declining during most of May and June, prices of most kinds of slaughter cattle rose in the last week of June and in early July. Prices of feeder cattle declined sharply during May and June and in early July they were not so high in relation to slaughter cattle as they were two months earlier. In mid-July prices of slaughter cattle were substantially higher than a year earlier while prices of feeder cattle were only slightly higher.—P. R.

LAMBS: Larger Crop

The 1940 lamb crop totaled 32.7 million head, about 3 percent larger than the 1939 crop of 31.9 million head. In the western sheep States, including Texas and South Dakota, this year's lamb crop is about 21.6 million head, or 4 percent larger than last year's crop. In the native sheep States the 1940 lamb crop is a little larger than the crop of last year.

Present indications are that supplies of sheep and lambs for slaughter during the remainder of the grass lamb marketing season, to December 1, will be larger than a year earlier. The late lamb crop in the western States has developed well and is larger than that of last year. A larger proportion of late lambs will be in slaughter condition than last summer and fall, when dry weather and short range feed resulted in poor development of late lambs. The early lamb crop in the native sheep States developed slowly as a result of unfavorable spring weather, and a larger than usual

proportion of native lambs will be marketed after July 1 this year.

Although marketings of lambs for slaughter are expected to be larger than a year earlier during the remainder of 1940, the effect of the larger supplies on prices will be offset by the stronger consumer demand for meats.

Prices of slaughter lambs declined seasonally during June and broke sharply in July. Total inspected slaughter of sheep and lambs for the first 6 months of 1940 was about the same as that of a year earlier.—P. R.

WOOL: Consumption Up

Domestic mill consumption of wool during the second half of 1940 is expected to be somewhat larger than in the first half of the year. This will be a strengthening influence on domestic wool prices. The increase in mill consumption is expected to result from larger Government purchases of wool goods under the National Defense Program, from improvement in income of consumers, and from increased retail sales of wool goods. Changes in price in the next several months, however, will depend chiefly on developments in foreign countries, as the United States will be importing substantial quantities of wool during this period.

Domestic production of shorn wool in 1940 was estimated at 388 million pounds. This is 3 percent more than the production of about 377 million pounds in 1939.

Wool prices in the United States advanced from 1 to 5 cents a pound during June with the increased buying of raw wool by mills to fill Government contracts for wool cloth and blankets. Prices weakened somewhat, however, during the first half of July but continued substantially above the levels of July last year.

Recent European developments have altered considerably the situation in Southern Hemisphere wool markets. With most continental Eu-

ropean countries now included in the British blockade, the United Kingdom, Japan, and the United States probably will be the only important buyers of Southern Hemisphere wool exports so long as the blockade is maintained.—P. R.

FATS, OILS: Low Priced

Except for butter, fish oils, and linseed oil, prices of domestic fats, oils, and oilseeds have been at unusually low levels in recent weeks, chiefly because of large supplies of lard, greases, tallow, and soybean oil in the United States, and the closing of continental European markets to world trade. Lard prices in early June were the lowest since 1933, but some improvement has since taken place, and further improvement is indicated by the prospective reduction in the pig crop this year, which will be reflected in reduced lard output in the hog-marketing season beginning next October. On the other hand, increased production of soybeans and soybean oil are indicated for the 1940-41 season.

Prices of some imported oils, in contrast to prices for most domestic items, have recently attained high levels, largely as a result of the curtailment of imports from Europe (fish-liver oils, olive oil), the blockade of China (tung oil, teaseed oil), a short supply of perilla seed in Japan, and high rates for ocean shipments.—R. M. WALSH.

MILK: Outlook Good

Milk production is declining seasonally but is larger than at the same time a year ago. Compared with last summer pastures are better, there are more cows on farms, and feed supplies are ample. These factors have stimulated production and will probably result in relatively high production during the late summer and early fall unless the weather should be very unfavorable.

Prices of dairy products are decidedly higher than a year ago. Do-

mestic consumption has also been high and stocks of dairy products are only about normal for the summer season.

There also has been some improvement in the foreign demand for dairy products; and in June, Government agencies purchased relatively large amounts of butter, cheese, evaporated milk, and dry skim for relief distribution.—E. E. VIAL.

TRUCK CROPS: Plentiful

For the country as a whole, a preliminary estimate of the acreage planted to truck crops for market in 1940 shows an acreage about 3 percent less than that of 1939 but about 8 percent above the 10-year (1929-38) average. Decreases are reported for the South Atlantic, South Central, and Western groups of States. An increase is reported for the North Atlantic group, while the North Central States show no change.

The flow of truck crops to market has finally recovered from the effects of the late winter and spring freezes, and has resulted in a sharp increase in marketings. Prices declined precipitously in recent weeks, and in mid-July those of many commodities averaged below a year earlier.

Market supplies are now moving in large volume from the market garden areas and from States adjoining the large industrial centers of the country. Truck crop supplies usually reach a peak in the summer months, and it appears that supplies this summer will be plentiful. As compared with last year, summer production of commercial truck crops probably will be increased 13 percent this season. Increases are reported for lima beans, beets, cantaloups, carrots, sweet corn, lettuce, onions, peppers, spinach, tomatoes and watermelons, but decreases are indicated for cabbage, celery, cucumbers, eggplant, and green peas. For the late States, acreage reports indicate increases in prospect for cabbage, cantaloups, cucumbers, peppers, and tomatoes.—G. BURMEISTER.

This Changing Agricultural World

IV: Cotton

PROFOUND changes have marked the world's cotton enterprise during the last 25 years. World crops increased as new fields were brought into production. New fibers came on the scene to crowd millions of bales of cotton out of accustomed uses; but, in spite of the new competition, consumption of cotton in the world increased by a third. In fact, the gain in actual pounds was almost double that of the synthetic rivals. The greater production and consumption of cotton, however, brought no gain in international trade either in cotton or in goods. Industry shifted to new locations, both in the United States and in other parts of the world. Quotas, preferences, and barter rose to restrict trade in a world market once almost free.

PROBABLY the most significant feature of the last quarter century has been the great growth of national self-sufficiency throughout the world, both in raw cotton and in textiles. Many countries which were formerly importers of cotton textiles have accomplished by various means the establishment of textile industries capable of supplying partially if not wholly the needs of their own populations. This development has been especially marked in countries having abundant labor resources. It has been even more marked in those countries which, in addition, produced exportable surpluses of raw cotton.

Conversely, countries primarily industrial, equipped with well established textile plants, have quite generally intensified their efforts to develop new sources of raw material within their empires whenever indeed they have not been able to do so within their own borders. When in recent years progress in this direction could not be made with satisfactory rapidity,

a number of the more important consuming countries have sought to attain a greater degree of self-sufficiency, first by stimulating the production of rayon and other synthetic fibers and then by compelling their people to use goods made from them in substitution for cotton goods.

THESE movements toward self-sufficiency are in part distinctly economic: They can be explained by such factors as comparative wage and freight rates, power costs, or the profit to be had from development and utilization of latent resources. In part, also, they have been motivated by nationalistic considerations. But, whether the causes be called economic or political, the results are of far-reaching consequence. Just before the outbreak of war in 1914 the mills of the world used annually about 21 million bales of cotton or a little more. Of that amount about 13 million bales had to be imported from other countries. Twenty-five years later the world seemed to have grown accustomed to using at least 28 million bales but imports were still only about 13 millions. At the beginning of the period only about 8 million bales were spun in the country of their growth. In the end, the quantity of cotton so spun had been nearly doubled by the addition of all of the 7 million bales by which total world consumption had increased.

Even more remarkable is the story of cotton goods. In the calendar year 1913, it is estimated that cotton to the amount of about 6¼ million bales was exported in the form of yarn and cloth from the countries in which it was processed to consuming countries less developed industrially. By 1937—the best of the years immediately preceding the European war—though consumption of cotton had increased by about 7 million bales, world exports

of yarn and cloth had fallen to the equivalent of something less than 4 million bales of cotton.

THESE facts throw light on the position in which American cotton growers now find themselves. Of the two countries which originate the bulk of the world's exports of yarn and cloth—the United Kingdom must import all, and Japan nearly all, of the cotton used. A decline in the export trade of either country is reflected at once in its requirement of raw cotton. For example, Great Britain before 1914 was importing about 5 million bales of cotton, of which roughly 1 million were needed to supply Britain's own population, 500 thousand were reexported, and close to 3½ million passed through British mills and out of the country to supply the needs of consumers in other lands. India alone took about a third of all these exports. Under such conditions, roundly 3¼ million bales of American cotton—more than the total exports from the United States to all countries in 1938-39—could readily be sold in Great Britain. But by 1939 growing self-sufficiency had taken all but a remnant of the goods market in India and had made deep inroads in the trade elsewhere. To supply her total domestic and export demand Britain was then requiring little more than 3 million bales altogether, and was taking from the United States average yearly imports of only about 1¼ million bales.

THE loss of 2½ million bales in the annual sales to Great Britain is the severest single blow that American cotton growers have sustained in 25 years. For some years, however, the effect of Britain's ebbing demand on the total of American export trade was concealed by the rise of exports to the Orient. Japan's mills, which before 1914 had seldom needed more than 400,000 bales of American cotton, increased their takings gradually until

in the early thirties they were close to 2 millions. This increase corresponded with gains in Japan's exports of cotton goods, part of which was at the expense of British trade. But lately Japan in her turn has felt the pressure of growing self-sufficiency in her customer countries, and has seen the trend of her exports turn downward. By 1939 exports from the United States to Japan had fallen about to the level of 850,000 bales a year—less than half the volume a few years before. In the case of Japan, however, American cotton exports have suffered from growing self-sufficiency even more within Japan itself than in Japan's overseas markets. Japan is one of 3 great users of cotton which have sought to achieve a high degree of self-sufficiency by requiring their own people to use home-produced rayon in place of imported cotton. Germany and Italy are the others.

IN 1913 the total amount of rayon produced in the world barely more than equalled the weight of 50 thousand bales of cotton. By 1939 it had increased almost a hundredfold to 4.7 million bales. Certain characteristics can be noted in the countries in which the greatest gains have taken place—United States, United Kingdom, France, Germany, Italy, and Japan. These countries stand relatively high in the scale of living standards; they are primarily industrial in their economies, and (with the exception of the United States) they are generally dependent upon imports for their supplies of raw cotton. A fourth feature, and one to be particularly noted, is that the 3 countries which lead in the use of rayon—Japan, Germany, and Italy—have enforced the substitution of rayon for cotton by law.

In 1939, the combined production in these countries of filament yarn and staple fiber together was nearly two-thirds of the world's total, and equalled the weight of more than 3 million bales of cotton. Germany,

which in the 3 years before 1914 took about 2¼ million bales of cotton from the United States alone, has managed since 1933 with less than 1¼ millions from all sources. Italy was taking less cotton just before the second World War than before the first; and in Japan, with all her unique gains in textile exports, cotton imports had receded to about the levels of the early 1920's. Cotton's gains of a quarter century have been in countries formerly less advanced industrially—principally India, Russia, and China—all, of course, important cotton producers.

THE United States might count itself fortunate had its opportunities to export cotton been limited only by the failure of total world exports to expand in a quarter century; but as matters have developed, competition among cotton-growing countries for shares in the total of world export trade has also greatly intensified. The urge to grow cotton has not been confined to countries with domestic industries to supply, but has been felt in many countries seeking to bolster income from exports. Brazil, Argentina, Peru, Mexico, Iran, Egypt, the Sudan, the British colonies and Mandated territories of East and West Africa, the Belgian Congo and other countries in lesser degree have pressed for and gained larger shares in the world's trade at the expense, primarily, of the United States. Thus, while in the 5 years 1909 to 1913 the United States contributed on an average about 8.8 million bales to the known total of about 12.9 million bales of world cotton exports—that is to say about 70 percent,—from 1934 to 1938 the United States' share was but 5.3 million bales or about 40 percent. Conversely, the share of foreign countries in the same time increased from roundly 30 percent to 60 percent.

TWENTY-FIVE years ago the world market for cotton was for practical purposes a free market. In

raw cotton, quality and price were the factors generally governing competition; on cotton goods, tariffs in the principal importing countries were not very considerable. But in this respect, also, great changes have taken place. Tariffs have been raised in many countries as a means either of protecting domestic industry or of establishing bargaining positions. By such arrangements as the agreement with Japan of 1934, since renewed from time to time, and that with the United Kingdom of 1939, India has sought to shelter her position in the cotton export markets by granting duty concessions on imports of cotton goods from the two countries, conditioned upon their taking certain minimum quantities of her raw cotton. Egypt has had under consideration a plan to grant quotas for the import of cotton goods from each of a number of countries proportioned on the share of each country's takings in her exports of raw cotton.

Consuming countries also have contributed to the change. Germany, since 1933, has secured the major part of her cotton supplies by barter arrangements of one kind or another. Italy in recent years has allocated foreign exchange for the purchase of cotton from the proceeds of exports of cotton goods. Japan, designating this device the "link-system," has applied similar measures since July 1938. Competition in cotton goods has been further regimented by duty concessions in the British Dominions, import quotas in the crown colonies, and restrictions of various kinds in such important markets as Argentina, Egypt, and the Netherlands East Indies.

IN THE United States, rising living standards were attended by an increase in per capita consumption of cotton up to the time of the World War, but since that time there has been no further gain, if indeed cotton has quite held its own. A population

increase, however, from 96.5 millions in 1913 to 130.2 in 1938 has increased the total domestic demand. American mills, which on the eve of the World War used only about 5 to 5½ million bales (including a substantial amount exported as goods), raised their consumption to an average of 6½ millions in the five years ended with August 1939, and reached over 7¼ millions in 1936-37—a record high level up to that time. Exports of textiles meanwhile had been much reduced.

An important change in the United States, however, was the continued shift of mills away from the New England States to the cotton-growing States of the Southeast. In 1913, 2.9 million bales—slightly over 52 percent of the cotton used in the United States that year—was spun in cotton-growing States. In 1939, the South's consumption had more than doubled to 5.8 million bales, and the percentage was 85. This shift, important from the industrial and civic standpoints, has also certain important implications for agriculture. It means that cotton States east of the Mississippi River, which 25 years ago contributed substantially to the total of cotton exports, have not for some time done so and now find all but a small fraction of their market in the Carolinas, Georgia, Alabama, and Virginia. By the same token, States west of the River, some of which once shipped considerable amounts of cot-

ton coastwise to New England, find themselves at a comparative disadvantage with their eastern neighbors in point of the freight-haul to the southeastern mill centers, and with their interests consequently more than ever identified with exports.

TOWARD the world situation, however, cotton growers whether of the eastern or western belt have much the same outlook. The buoyancy and expansion of the great world market for American cotton which characterized the scene in pre-1914 years are, at least for the present, gone. In their place are self-sufficiency over large areas, new competition, restricted markets, and huge surpluses which a growing home consumption can only slowly reduce. The present war has brought no genuine relief but rather an intensification of these problems. Fortunately, however, the economic mechanisms of today have proved capable of absorbing the first shocks of the war. Nineteen hundred and thirty-nine passed without the closed markets, 5-cent cotton, or the buy-a-bale movement of 1914. It remains now to be seen if, in the post-war reconstruction ultimately to come, ways cannot be found to meet the basic difficulties in the world situation.

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Relations.*

War and the World's Merchant Marine

AT THE outbreak of the European war the available mechanically propelled dry-cargo vessel tonnage of 100 tons gross and upwards was approximately 30 percent greater than at the beginning of the World War, a figure that was substantially more than the increase in international trade during this period. An additional, but indeterminate volume should be allowed for other factors

such as the improvements in vessel speed, safety, size, and age of ships. Shipping is now conducted in faster, safer, and more modern vessels than it was a quarter century ago.

A larger number of vessels are now suitable for transoceanic service—vessels measuring over 2,000 tons gross each—than in 1914. Because of the adverse effects of a major war upon the supply of transport capacity, the

world's merchant fleet was inadequate to transport the volume of world trade in 1917. Vessel space was at a premium, freight rates rose to unprecedented levels. All things considered, the present world's merchant fleet can carry a larger quantity of freight within a given period of time than is indicated by the volumetric increase alone since 1914.

RECENT military events have reduced the amount of new ship construction, but there appears no immediate danger of a shortage of vessel-carrying capacity and of sharply rising freight rates. The German warfare against merchant ships has not been as successful as it was in 1917 and 1918, although the current monthly rate of destruction has increased. The recent extension of the British blockade over the imports and exports of the French North African colonies and virtually all of Europe has restricted the movement of vessels to these countries, and it has forced the owners of the vessels to seek alternative employment for them.

Control over most of the merchant tonnage of the Scandinavian and lowland countries now gives England an adequate amount of tonnage for its own use. Indeed, this tonnage is large enough to permit control of freight rates on most routes. Also, the extension of the United States Neutrality Act to include the Mediterranean area has released about 270,000 tons of American vessels for operation on other routes. An accumulation of shipping has been reported recently at various ports along the United States Atlantic seaboard and at the River Plate in Argentina.

How long this relatively favorable shipping situation will continue is of course unpredictable. It is a fact that, although there appears to be a good margin of supply of shipping space in relation to the demand, the production of new ships has been sharply restricted in recent months. It was believed at the outbreak of the

European War that the shipbuilding industry could produce in 1940 at least as much tonnage as in 1938. Recent events in Europe have altered this prospect.

PRIOR to the World War, well over half of the new tonnage constructed in the world was built in the United Kingdom. In 1913, the British shipyards produced more than 63 percent of the world's total. In consequence, international commerce was largely dependent upon British shipways to minimize the losses due to military action and ordinary marine risk. Failure of these yards to produce their normal tonnage and the inability of neutral countries to expand production during the first 3 years of the war accentuated the shortage of vessel space.

International commerce in 1938 was much less dependent upon British shipyards. The decline in British production during the post-War period and the increased shipbuilding activity of other countries—notably Japan, Germany, Italy, Holland, Sweden, and Denmark—had decreased the British relative position to less than 36 percent of the world total. But it appeared at the outbreak of the European War that even without the German shipyards, the remainder of the world would construct at least as much tonnage as was produced in 1938, excluding that built in Germany.

THE forecast of production in 1940 seemed sound in view of the larger merchant shipbuilding program in the United States, the possibility that other neutral shipbuilding countries might increase their production, and the much larger shipbuilding program initiated by the United Kingdom. However, the extension of the war to include the western coastal countries of Europe has changed this outlook.

In 1938 the shipways in these countries, including Sweden, launched

about 650,000 tons gross or 25 percent of a total of 2,553,000 tons produced in the world outside of Germany. The present status of the Swedish yards is unknown, and the yards in the other coastal countries are now controlled by the German army. In view of the German occupation of the French channel ports, it will be difficult for British yards on the eastern and south-eastern shores of Scotland and England to continue operations.

Present military operations also will require the British to use more of their shipways for naval construction and repair. The entrance of Italy into the war is another adverse factor. Italian yards built 94,000 tons in 1938 and the United States Maritime Commission had estimated that Italian yards would produce about 150,000 tons gross this year.

THERE are now only 2 major shipbuilding countries—United States and Japan—not affected by the German occupation of Norway, Denmark, Holland, Belgium, and France, and by the entrance of Italy into the war. It has been estimated that United States shipyards will construct about 450,000 tons gross in 1940 in contrast with 201,000 tons in 1938. It is doubtful that this program can be further expanded without the construction of additional shipways, in view of the recently announced national defense program. Japan is not likely to produce as much tonnage as in 1938, because of its advanced naval shipbuilding program and its war in China. Furthermore, Japanese shipyards are handicapped by lack of steel and machine tools.

HOBART S. PERRY.

Vegetables in the American Dietary

THE consumption of vegetables in the United States falls into three major groups: (1) Potatoes, including sweetpotatoes, (2) other fresh vegetables, and (3) canned vegetables. The accompanying chart contains index numbers of the annual per capita consumption of each of these major groups during the past 20 years, and the tables contain 5-year averages of the per capita consumption of the principal items within each group, in terms of the estimated weight available for sale in retail markets.

The per capita consumption of Irish potatoes during the 20 years 1919-20 to 1938-39 has been characterized by large fluctuations around a slowly declining trend. Consumption during the 5 years 1934-35 to 1938-39 averaged about 133 pounds per capita compared with 148 pounds during the 5 years 1919-20 to 1923-24. This decline is generally associated with a general dietary shift away from foods having a high starch content. The growth of population, however, has

more than offset the decline in the per capita consumption of Irish potatoes, with the result that total domestic disappearance during the 5 years 1934-35 to 1938-39 averaged about 300 million bushels compared with about 283 million bushels in 1919-20 to 1923-24.

The per capita consumption of sweetpotatoes during the last 5 years of the period was 3.5 pounds below the average of the first 5 years, but this has not been connected with any well-defined trend. From an average of about 27 pounds during the 5 years 1919-20 to 1923-24, consumption dropped to about 20 pounds in the 5 years 1924-25 to 1928-29, but recovered to 22 pounds in 1929-30 to 1933-34 and to 23 pounds in 1934-35 to 1938-39. The consumption of sweetpotatoes, especially important in the Southern States, is affected by the cotton situation. When income from cotton is relatively low, there is a tendency to supplement purchased food supplies by increasing sweetpotato output, and to

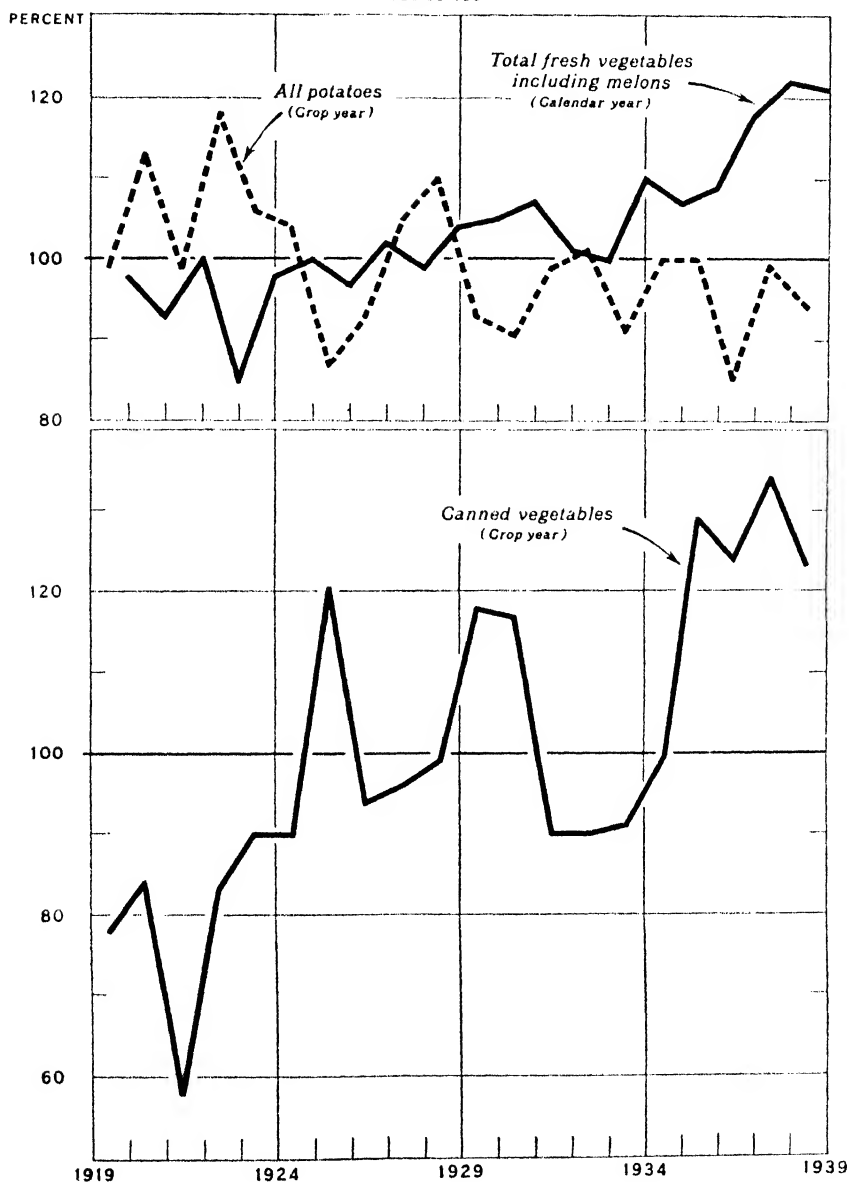
turn away from this source when income from cotton is high.

THE per capita consumption of fresh vegetables, excluding potatoes, averaged about 164 pounds during the 5 years 1935-39, compared with 133 pounds during the 5 years 1920-24,

an increase of approximately 23 percent. These estimates are greatly in excess of the per capita production of commercial truck crops for fresh market, which rose from 50 pounds in 1919 to 102 pounds in 1938. This difference is largely accounted for by allowances for the products of market

INDEX NUMBERS OF PER CAPITA CONSUMPTION OF VEGETABLES

1925-29=100



and city gardens not covered by published estimates and by computing per capita consumption on the basis of non-farm population, which assumes that practically all commercial truck crops are consumed in urban areas and that the per capita consumption of vegetables grown and consumed on farms is on the average equal to that in the urban areas.

The general increase in the consumption of fresh vegetables has been the result of an increased consumption of most of the individual vegetables. Particularly marked was the rise in the consumption of lettuce from 7.8 pounds during 1920-24 to 13.8 pounds in 1935-39; of carrots from 3.4 pounds to 8.4 pounds; and of celery from 5.6 pounds to 9.1 pounds. Cantaloups, watermelons, and spinach do not exhibit definite trends for the period as a whole. The consumption of cantaloups averaged 8.9 pounds per capita during the 5 years 1920-24, rose to 10.3 pounds during 1925-29, and returned to an average of 8.8 pounds during the 5 years 1935-39. The consumption of spinach averaged 3.3 pounds during 1935-39 compared with 3.5 pounds in 1920-24, but this does not imply a downward trend for the period as a whole. Per capita consumption during the 10 years 1925-34 averaged about 0.5 pound below the 5 years 1920-24, but consumption during the 5 years 1935-39 has tended to return to the earlier level. With the growth of population, the total annual disappearance of fresh spinach has risen to about 426 million pounds during 1935-39 compared with about 362 million pounds during 1920-24.

THE consumption of the canned vegetables included in the accompanying table has increased from an average of about 14 pounds per capita

during the 5 years 1919-20 to 1923-24 to an average of 22 pounds during the

Selected Canned Vegetables: Apparent Per Capita Consumption, 1919-38 ¹

Item	1919-20 to 1923-24	1924-25 to 1928-29	1929-30 to 1933-34	1934-35 to 1938-39
<i>Pounds per capita, canned weight</i>				
Asparagus.....	0.38	0.48	0.45	0.48
Snap beans.....	.72	1.24	1.54	1.76
Beets.....	.23	.37	.43	.63
Corn.....	3.60	3.90	3.56	3.98
Peas.....	3.06	4.18	3.82	4.66
Pumpkin and squash.....		.36	.53	.40
Spinach.....	.48	.65	.66	.88
Tomatoes.....	6.10	6.14	5.78	5.72
Tomato pulp, juice.....	.69	.62	1.41	3.33
Total.....	14.16	17.94	18.18	21.84

¹ Consumption in terms of canned weight during year beginning July 1. Total annual consumption calculated from canned pack, stocks, exports, imports, and shipments to the insular areas, except for pumpkin and squash, spinach, and tomato pulp and juice, for which only pack figures are available. Per capita consumption calculated on the basis of total population.

Vegetables, Fresh: Apparent Per Capita Consumption, 1920-39 ¹

Item	1920-24	1925-29	1930-34	1935-39
<i>Pounds per capita</i>				
Asparagus.....	0.7	1.2	1.7	1.9
Beets.....	1.8	1.9	3.0	2.7
Snap beans.....	5.2	4.5	6.0	6.9
Cabbage.....	24.5	23.2	21.8	25.2
Carrots.....	3.4	4.9	7.1	8.4
Cantaloups.....	8.9	10.3	9.3	8.8
Cauliflower.....	1.1	1.9	2.2	2.6
Celery.....	5.6	7.2	8.6	9.1
Corn.....	8.3	7.1	7.5	8.8
Lettuce.....	7.8	12.3	12.8	13.8
Onions.....	12.8	13.5	14.1	15.4
Peas.....	.7	1.2	1.5	1.7
Spinach.....	3.5	3.0	3.0	3.3
Tomatoes.....	13.5	14.0	13.6	16.6
Watermelons.....	27.3	25.6	27.0	28.5
Other ¹	8.3	9.7	8.9	10.3
Total, ex- cluding potatoes.....	133.4	141.5	148.1	164.0
Potatoes.....	147.9	142.4	132.5	132.6
Sweetpotatoes.....	26.9	20.2	22.4	23.4
Total.....	308.2	304.1	303.0	320.0

¹ Consumption in terms of estimated weight available for sale in retail markets during calendar year, except for potatoes, sweetpotatoes, and onions, which are calculated on a crop-year basis. Total annual consumption is calculated from production adjusted for exports, imports, and shipments to insular areas, where they are significant. Production includes commercial production plus estimates for market and city gardens. Per capita consumption calculated on the basis of urban population except for potatoes, sweetpotatoes, and onions, for which total population figures were used.

¹ Artichokes, lima beans, cucumbers, eggplant, kale, peppers, pimientos.

5 years 1934-35 to 1938-39, an increase of over 50 percent. Converted to a fresh equivalent, this represents an increase from about 25 pounds per capita to 37 pounds per capita. This is considerably less than the reported production per capita of commercial truck crops for processing, which rose from 39 pounds in 1919 to 55 pounds in 1938. The bulk of the difference can be accounted for by the fact that these figures do not include cabbage for kraut, cucumbers for pickles, or that part of the tomato crop used for sauces and soups. In addition, the series covers only products canned, and not those frozen or otherwise processed. It does, however, include pumpkin and squash, which are not included under truck crops for processing.

As with the vegetables consumed fresh, practically all the individual items contributed to the general expansion in the use of canned vegetables. Particularly important were snap beans, peas, and tomato juice. The expansion of the latter has been

phenomenal. Its use was practically negligible prior to 1929, but has averaged about 2.5 pounds per capita during the 5 years 1934-35 to 1938-39.

THE predominant influences on the consumption of vegetables are changes in dietary habits which show themselves in long-time trends. This is particularly true of fresh vegetables, excluding potatoes. The consumption of canned vegetables shows a well-defined cycle which is correlated with the expansion and contraction of the national income, whereas the consumption of sweet potatoes shows some tendency to move inversely with national income. The effect of income upon the consumption of Irish potatoes and other fresh vegetables is small and not well defined. Changes in the available supplies due to fluctuations in yield are of course important in determining consumption in any given year. This factor is particularly important in the case of Irish potatoes.—J. P. CAVIN.

Our Changing Farm Population

THE farm population of the United States totals more than 32,000,000 persons. This represents an increase of approximately 2,000,000 since 1930. The farm population increased during this period at about the same rate as the total population, with the result that the ratio of farm to total population—about 1 to 4—is practically the same now as it was in 1930. The maintenance of this proportion is a new development in American population trends. Heretofore the farm population increased less rapidly than the nonfarm population; indeed, during the 20 years preceding 1930 the farm population declined both in total and in proportion of the whole population.

AN increase in farm population at the present time accentuates the growing pressure of population on agricultural income. Technological changes in agriculture have kept pace with those in industry, with the result that labor requirements for agricultural production have been decreased. Normal requirements in farm production for both domestic and foreign outlets can now be met by approximately 1,600,000 fewer workers on farms than in 1929—or a total of about 3,500,000 fewer farm people than there are today. The estimates of employment on farms show a decrease of more than 300,000 persons during the last decade. But while employment opportunities on farms were de-

creasing, there was less likelihood that farm people would secure jobs if they moved away. Many stayed. The unemployment on farms reported in the 1937 Census of Unemployment is largely a result of this decrease in migration off the farms.

There was no decrease in the number of young farm people reaching maturity during the 1930's; nevertheless, the volume of net migration from farms during the decade was only a little more than one-third the net migration during the 1920's. Consequently, there are approximately 3,500,000 more persons living on farms than if the migration from farms had been at the same rate as during the 10 years before 1930. Since young adulthood is normally the time of greatest migration, the effect of the reduced migration from farms has been especially marked in this group. Two million of this 3,500,000 are young people between 15 and 30 years of age.

CHANGES in farm population were not uniform throughout the country during the past decade. In some areas—especially areas best adapted to commercial farming, including the sections which were most severely hit by drought—there was enough migration from the farms to bring about a reduction in farm population. But in other areas there were general increases large enough to show an increase for the entire country.

One result of these changes was to increase the number of persons living in the more densely populated farm areas and to decrease the number living in the less densely populated farm areas. Three of the major geographic divisions were about equal in farm population in 1930—East South Central, 5,052,000; West South Central, 5,275,000; and West North Central, 5,030,000—but by 1940 the number of people on farms in the East South Central States had increased to 5,624,000; in the West South Central States to only 5,303,000; and in the West North Central States there was a decrease to 4,840,000.

There was some movement from towns and cities to farms, especially during the early years of the decade, but the increase in total farm population cannot be accounted for as the result of an exceptionally large back-to-the-land movement. The fact is that more people moved to farms between 1920 and 1930 than between 1930 and 1940—approximately 13,000,000 compared with 10,600,000. The number of persons moving from farms to towns and cities decreased more sharply in the latter decade—from 19,400,000 to 12,800,000. With movement from farms more sharply reduced than movement to farms, there was a reduction in the net volume of migration—from approximately 6,000,000 to only 2,179,000.

ONE of the currents of migration which attracted much attention during the decade was from parts of the Great Plains and adjacent areas to the Pacific Coast States. This movement is still continuing. The areas from which the migrants went were areas of considerable outmigration prior to 1930—the West South Central, which reported increases between 1920 and 1930, and very small increases since 1930; and the West North Central States, which lost farm population in both decades.

In all these areas there had been some increase in farm population when industrial employment opportunities were curtailed after 1929. The

Changes in Farm Population, 1930-40

Division	1930	1940	Increase or decrease
	Thousands	Thousands	Thousands
New England.....	668	746	+178
Middle Atlantic.....	1,692	1,941	+249
East North Central.....	4,442	4,852	+410
West North Central.....	5,030	4,840	-190
South Atlantic.....	5,864	6,432	+568
East South Central.....	5,052	5,624	+572
West South Central.....	5,275	5,303	+28
Mountain.....	1,122	1,149	+27
Pacific.....	1,124	1,358	+234
United States.....	30,169	32,245	+2,076

increases continued until 1934. After that the need for alternative opportunities was greatly increased by severe droughts. In some parts of these areas, continued mechanization of farming operations had further reduced opportunities for farmers or even displaced those already operating farms. As a result, there was a migration from the farms and villages of these areas during the latter part of the decade, much of which went to the Pacific Coast States.

Studies of migration show that the number of people moving into Washington, Oregon, and Idaho was about the same during the 1930's as it had been during the 1920's. Similar studies in California show that somewhat fewer persons moved in during the 10 years after 1930 than during the 10 years before. The problems associated with these migrations have been due largely to differences in the types and resources of the migrants as well as the economic opportunities in the areas receiving them. A large proportion of the migrants between 1920 and 1930 was readily absorbed into an expanding urban and rural economy. Many brought sufficient capital to assure continued self-support. The migrants of recent years had little or no capital and large numbers entered a labor market in which the demand is for unskilled seasonal

workers. Many who have gained a foothold on the land at their new locations have settled on small unproductive farms, not suited to permanent occupancy.

MANY of the migrants to the Pacific Coast States came from areas where population pressure had already become acute by 1930. This was especially true in parts of Eastern Oklahoma and the Boston Mountains, and surrounding areas in Arkansas. Here farm incomes in 1929 were low and rates of natural increase have been high. Rates of migration from rural areas were also high before 1930. Because of high birth rates in these areas in the past, the population of working age continued to increase rapidly after 1930, but the previous outlets in industrial employment were no longer available in the same volume as before. These conditions, and a lack of resources for profitable employment locally, created a serious relief problem. The current migration to the Pacific Coast States has provided a partial substitute for the earlier migrations to industrial centers. In some other areas contributing large numbers of migrants, changes in farm organization have reduced employment opportunities in spite of the continued increase in population of working age.—CONRAD TAEUBER.

Surplus Commodities for School Lunches

WITHIN the past year the school lunch program has become an important outlet for agricultural surpluses purchased by the Surplus Marketing Administration (formerly by the Federal Surplus Commodities Corporation). Since 1935, schools have been eligible to receive surplus foods for free lunches for needy and undernourished children. In August 1939, however, the F.S.C.C. announced

the expansion of its school lunch work, setting for its goal the service of 5,000,000 children. Special personnel were appointed to facilitate the growth of the program in the various States.

Results of these activities are indicated in table 1, which gives statistics for March of each year, that being usually the peak month of the program. It shows that in March of this year

nearly 2.5 million children were served daily lunches, consuming 14.7 million pounds of surplus commodities. Both of these figures are about 2.8 times the corresponding figures for 1939. Table 2 lists some of the commodities which schools have received in largest quantity during the past school year. School lunches accounted for almost 10 percent of all surplus foods distributed last March.

Continuation of the work of the Surplus Marketing Administration in conjunction with WPA, NYA, and many other organizations and agencies, Federal, State, and local, forecasts a further marked increase in the program next year. Meanwhile, plans have been made for its continuance during the summer at camps and playgrounds.

THE school lunch movement is no innovation, of course. Free or low-cost lunches for poor school children were provided in many places in Europe before the turn of the century. Successful experiments in the same direction were started in many of the larger cities in the United States during the 1900's. Agricultural extension programs have fostered hot lunches in rural schools for many years. * * * The plight of millions of children during the depression, however, reawakened public concern for child welfare. Countless teachers contributed from their own resources to feed pupils who came to school hungry. Private and public agencies took up the work on an emergency basis. With the development of a Federal relief program agencies of the Federal government came to their aid.

The Children's Bureau of the United States Department of Labor has estimated that at least one-fifth of all school children show physical defects indicative of malnutrition. Among the urban families included in the National Health Survey in 1935-36, more than 25 percent of the children under 16 years were in families receiv-

ing public assistance in some form. An additional 22 percent were in non-relief families of income under \$1,000. Such figures as these give at least some suggestion of the magnitude of the problem which the school lunch program attacks. Federal aid in meeting it is important, since the areas in which the need is greatest are commonly those where local means are least adequate.

THE mechanism by which surplus commodities are provided for

Table 1.—Statistics of the school lunch program for March of each year, 1937-40

Year	Children	Schools	Food distributed	Value of food distributed
	<i>Number</i>	<i>Number</i>	<i>Pounds</i>	<i>Dollars</i>
1937....	342,031	3,839	1,192,256	85,062
1938....	567,000	11,021	3,944,770	201,318
1939....	892,259	14,075	5,244,211	408,804
1940....	2,483,578	35,658	14,706,698	1,107,782

Table 2.—Principal commodities distributed to school lunch programs, July 1, 1939-May 31, 1940

Commodity	Pounds distributed	Number of months during which distributed
Dairy products:		
Butter.....	4,744,291	11
Eggs.....	1,332,404	11
Cereals:		
White flour.....	7,459,540	11
Graham flour.....	2,906,086	11
Whole wheat cereal.....	512,385	11
Corn meal.....	4,655,956	11
Corn grits.....	1,676,192	7
Rolled oats.....	2,334,138	7
Vegetables:		
Navy beans.....	912,695	11
Lima beans.....	816,803	11
Onions.....	1,739,487	11
Fruits:		
Apples.....	30,989,167	10
Oranges.....	15,253,273	11
Pears.....	1,360,645	9
Peaches—fresh.....	168,310	3
Peaches—canned.....	5,087,234	8
Peaches—dried.....	626,621	9
Dried prunes.....	1,661,361	9
Raisins.....	3,419,618	11
Grapefruit juice—canned.....	1,634,510	11

Total distribution to school lunch programs, July 1, 1939, through May 1940 was 93,308,992 pounds, at an estimated value of \$6,944,133.

school lunches is essentially simple. The Federal Government, through the Surplus Marketing Administration, buys quantities of various crops in an effort to strengthen market prices to growers. These commodities are then shipped directly to welfare or relief agencies in the States, who apportion them among relief families and certain other types of recipients—including school lunch projects. Allocations to schools are based on the number of children certified as “needy and/or undernourished,” certification being most commonly made at the instance of school authorities or public health or welfare agencies, usually after investigation of the children’s families.

To receive commodities, the sponsor of the project must agree that they will be used to supplement rather than replace normal food purchases. Government purchase of surpluses helps farmers, essentially, by increasing the effective demand for their products. But if the persons receiving the commodities substitute them for their own regular purchases, the effect of the Government program on the market is correspondingly offset. Actually, such substitution appears to be less of a problem in the school lunch program than in most other methods of surplus disposal. Some families may decrease their food budgets when their children receive free lunches at school, but this is not likely to be important among families already on short rations.

On the other hand, it is estimated that more than 75 percent of the school

lunches in the program last March were new projects, in the starting of which the availability of free surplus commodities was usually a deciding factor. Foods which local sponsors buy to use with their surplus allotments constitute a new, complementary demand for foodstuffs, over and above that represented by the Government purchases. This tends further to increase prices and sales of farm products, with corresponding benefits to the national farm income. From the farmer’s point of view, this is a somewhat unique advantage of the school lunch program as an outlet for surplus commodities.

ANOTHER aspect of the program of interest to farm families is the extensive participation among rural schools. It is estimated that nearly 75 percent of the schools participating last March, and over 50 percent of the children benefited, were in rural communities. * * * The primary purpose of the legislation which makes possible the school lunch program is, of course, aid to agriculture. From the point of view of the welfare of the Nation as a whole, however, the benefits to needy children appear equally important. Particularly during the present period of interest in national defense there is heightened realization of the value of a program dedicated to to improving the nutrition of the oncoming generation.

HERMAN M. SOUTHWORTH
and M. I. KLAYMAN.

A Study of Fertilizer Consumption

FARMERS in recent years have spent about 200 million dollars annually for commercial fertilizers. In 1938 approximately 7.5 million tons were used. A recent study based upon reports of crop correspondents shows that fertilizer consumption

varies widely in different parts of the country, and for different crops in the same section. It shows that farmers along the Atlantic coast still use fertilizers to a much greater extent than do farmers in other parts of the country, and that crops of high value

per acre provide large outlets for fertilizer in relation to acreages grown.

The study applies to crops harvested in 1938 when the quantity of fertilizer used was the second largest since 1930 but not greatly different from the average consumption in the years 1925-30. More than 70 percent of the fertilizer used on farms in 1938 was applied to the crops covered by the study.

COTTON formerly provided the largest single outlet for fertilizer use. But with the marked reduction in cotton acreage, more fertilizer was used on the corn crop in 1938 than on cotton. For the entire country the corn crop uses fertilizers in about the same proportion as it utilizes cropland. Fertilizer applications on corn were heaviest in New England but also relatively high in the Middle Atlantic and the South Atlantic States. Little fertilizer was used on the corn crop in the Mountain States, the North Central States, and the Pacific Coast States.

Of the crops grown on extensive acreages fertilizer use on cotton was the most pronounced. For the entire country fertilizer use per acre on cotton was about 200 percent above the average quantity used on corn. Fertilizer use in the South Atlantic States averaged about 350 pounds per

acre and was about 75 percent greater than the average quantity used in the East South Central States and fifteen-fold greater than the average of the West South Central States.

Use of commercial fertilizers on wheat was most pronounced in the South Atlantic and the Middle Atlantic States. Practically no fertilizers were used in the important Great Plains, Mountain, and Pacific Coast wheat areas. Although fertilizer use on wheat averaged higher than for corn in most groups of States, wheat acreage is concentrated in States where little or no fertilizer is used, with the result that for the country as a whole fertilizer used per acre on wheat was less than for corn.

Less fertilizer was used on oats than on wheat. Average quantities per acre were heaviest in the South Atlantic and Middle Atlantic States. Only small quantities of fertilizer were used on oats in the Mountain, West North Central, and Pacific Coast States.

FOR the country as a whole, per acre applications of fertilizer on tobacco average heavier than for any other major crop. Less than 0.5 percent of the land for crop use is planted to tobacco but about 7 percent of the total fertilizer was used on the crop. In the South Atlantic States where flue-cured is the principal tobacco the

Commercial Fertilizer Used Per Acre for Specified Crops Harvested in 1938 ¹

	Corn	Wheat	Oats	Potatoes	Cotton	Tobacco	Sugar beets
	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.	Lb.
New England.....	227	(²)	66	1,665	.....	(³)	.....
Middle Atlantic.....	151	230	186	706	.....	(³)	.....
East North Central.....	37	106	19	183	.....	(³)	205
West North Central.....	3	5	3	34	.....	(³)	50
South Atlantic.....	134	271	189	1,132	348	931	.....
East South Central.....	50	112	(¹)	516	201	265	.....
West South Central.....	16	1	(¹)	247	22	.....	.....
Mountain.....	(¹)	(²)	1	23	.....	.....	61
Pacific.....	12	(²)	4	194	(¹)	.....	35
United States.....	39	27	.....	437	117	.....	85

¹ The indicated application of fertilizer is the total application on the reporting farms divided by the acreage of crops grown. ² Less than 1 pound. ³ No information was obtained relative to fertilizer use on crop indicated.

indicated application was more than 900 pounds per acre. This compares with an average of 265 pounds per acre in the East South Central States where burley, fire-cured and dark air-cured types are grown.

Potatoes also are a heavy user of fertilizer in relation to the acreage grown. Less than 1 percent of the cropland is planted to this crop which uses around 7 percent of the total fertilizer. Acreage applications were heavy in the States along the Atlantic Coast, especially in New England where the average quantity used per acre was 1,665 pounds. Fertilizer use on potatoes was also fairly heavy in the East South Central States. Average applications of fertilizer in the various groups of States tended to be

heavier on potatoes than for any other crop included in the study, but the potato acreage is concentrated to a greater extent than is tobacco in areas where fertilizers are used but little. Consequently, per acre fertilizer applications on potatoes average less than on tobacco.

Use of fertilizer on sugar beets has been expanding rapidly in the past decade. In the humid sugar beet areas applications average higher than in the irrigated areas. In the humid areas the reports show that complete ready-mixed fertilizers were in general use, whereas in the irrigated areas phosphates usually of high analyses were commonly applied.

A. P. BRODELL.

UNITED STATES: Exports and imports of specified agricultural commodities
June, 1939 and 1940, and September-June, 1938-39 and 1939-40 ¹

Commodity	Unit	June		September-June	
		1939	1940	1938-39	1939-40
Exports:					
Pork--		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Cured pork ²	Lb	8,083	1,013	59,999	43,394
Other pork ³	Lb	6,638	2,116	35,112	60,896
Total pork	Lb	14,721	3,129	95,111	113,290
Lard, including neutral	Lb	22,682	12,697	215,746	208,618
Wheat, including flour	Bu	6,797	1,835	91,350	38,069
Apples, fresh ⁴	Bu	83	26	11,641	2,822
Pears, fresh	Lb	82	92	131,533	64,547
Tobacco, leaf	Lb	15,156	20,257	401,108	274,834
Cotton, excluding linters (500 lb.)	Bale	120	139	3,187	6,157
Imports:					
Cattle	No	27	40	640	545
Beef, canned, incl. corned	Lb	7,879	4,851	67,536	67,346
Hides and skins ⁵	Lb	22,400	28,497	249,574	270,300
Barley malt	Lb	11,297	3,333	87,453	52,748
Sugar, cane (2,000 lb.)	Ton	287	302	1,939	2,673
Flaxseed	Bu	1,802	521	16,530	11,577
Tobacco, leaf	Lb	5,706	5,612	49,311	52,007
Wool, excluding free in bond for use in carpets, etc	Lb	6,336	11,311	58,886	150,988

¹ Corrected to July 24, 1940.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled or salted, and canned pork.

⁴ Includes baskets, boxes, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records of the Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1923-25=100) ¹	Income of industrial workers (1924-29=100) ¹	Cost of living (1924-29=100) ¹	Whole-sale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in— ⁶				
					Living	Pro-duction	Living and pro-duction		
1925.....	104	98	101	151	164	147	157	176	270
1926.....	108	102	102	146	162	146	155	179	271
1927.....	106	100	100	139	159	145	153	179	277
1928.....	111	100	99	141	160	148	155	179	279
1929.....	119	107	99	139	153	147	153	180	281
1930.....	96	88	96	126	148	140	145	167	277
1931.....	81	67	88	107	126	122	124	130	263
1932.....	64	46	79	95	108	107	107	98	219
1933.....	76	48	76	96	109	108	109	85	187
1934.....	79	61	78	109	122	125	123	95	178
1935.....	90	69	80	117	124	126	125	103	180
1936.....	105	80	81	118	122	126	124	111	182
1937.....	110	94	84	126	128	135	130	126	187
1938.....	86	73	82	115	122	124	122	124	186
1939.....	105	83	82	118	120	122	121	124	.....
1939—July.....	101	80	81	110	.....	.....	120	126	.....
.....August.....	103	83	81	109	.....	.....	119	.....	.....
.....September.....	111	86	82	115	122	123	122	.....	.....
.....October.....	121	91	82	116	.....	.....	122	126	.....
.....November.....	124	93	82	116	.....	.....	122	.....	.....
.....December.....	128	93	82	116	121	123	122	.....	.....
1940—January.....	119	93	82	116	.....	.....	122	119	.....
.....February.....	109	89	82	115	.....	.....	122	.....	.....
.....March.....	104	87	82	114	121	125	123	.....	.....
.....April.....	102	86	82	115	.....	.....	123	124	.....
.....May.....	106	87	82	114	.....	.....	123	.....	.....
.....June.....	114	89	83	113	.....	.....	123	.....	.....
.....July ⁷.....	.....	.....	.....	113	.....	.....	122	129	.....

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chick-ens and eggs	
1925.....	157	177	172	133	140	153	163	99
1926.....	131	122	138	143	147	152	159	94
1927.....	128	128	144	121	140	155	144	91
1928.....	130	152	176	159	151	168	153	90
1929.....	120	144	141	140	156	157	162	95
1930.....	100	102	162	140	133	137	129	87
1931.....	63	63	98	117	92	108	100	70
1932.....	44	47	82	102	63	83	82	61
1933.....	62	64	74	105	60	82	75	64
1934.....	93	99	100	103	68	95	89	73
1935.....	103	101	91	125	118	108	117	86
1936.....	108	100	100	111	121	119	115	92
1937.....	125	95	122	123	132	124	111	93
1938.....	74	70	73	101	114	109	108	78
1939.....	72	73	77	105	110	104	94	77
1939—July.....	66	73	80	99	107	96	89	74
.....August.....	64	71	70	99	101	100	90	74
.....September.....	83	76	73	117	117	107	102	80
.....October.....	77	74	73	128	112	112	108	80
.....November.....	79	75	68	123	107	117	117	80
.....December.....	87	82	65	96	101	118	97	79
1940—January.....	90	85	66	117	103	119	91	81
.....February.....	91	85	76	168	101	118	98	83
.....March.....	92	85	73	128	102	114	83	79
.....April.....	96	85	81	145	104	110	82	80
.....May.....	92	83	88	133	108	106	84	80
.....June.....	83	81	104	134	102	104	81	77
.....July.....	78	80	89	98	110	105	88	76

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1925=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real-estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE: The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

SPECIAL TECHNOLOGY ISSUE

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ANOTHER GOOD HARVEST IS BEING MADE. Silos are being filled, cotton picked, tobacco cut, fruit picked, late potatoes dug, rice harvested. The picking and husking of corn, under way in the Deep South, will expand soon all over the Corn-and-Hog Belt. In the Plains country the seedbed is being prepared for winter grains. Government indication is that about the same acreage of wheat will be seeded for harvest next year as this. * * * Twelve million workers are busy with the Fall harvests and other farm activities—approximately one-fourth of all the people now employed in the United States. Total farm production is a little smaller this year, but with carry-overs the supply of food, feed, and fibers is more than enough for domestic needs. Large quantities of farm products are available for export and domestic reserves. * * * Prices of farm products have been averaging higher this year than last, total cash farm income will be larger. BAE estimate for 1940 is 8.9 billion dollars from marketings and Government payments. This is 360 million more than in 1939; it is the second largest in 10 years.

Commodity Reviews

DEMAND: Pointing Upward

ECONOMIC conditions affecting the domestic demand for farm products continued to improve in August. Industrial production in July and early August was maintained at the higher rate which had been attained between April and June, and there probably was further improvement in industrial employment and pay rolls. Furthermore, weekly indexes by mid-August were indicating renewed gains in industrial production. Some additional improvement in the domestic demand for farm products is expected during the remainder of this year.

There is growing evidence of the stimulating effects on industry of the defense program. Construction contracts awarded in July were the highest for any corresponding month since 1929, and output in the steel, machinery, airplane, and chemical industries continued to expand. In addition, automobile output passed the low point incident to introduction of 1941 models in the week of August 10, and probably will increase rapidly for 2 or 3 months.

The United Kingdom is taking an increasing share of our industrial exports, now that continental European import markets are closed, but the probable adverse effects on domestic industrial activity and domestic demand for farm products of any loss of industrial exports which might follow an end to the European conflict will become less as industrial operations in connection with our domestic defense program expand.

The adverse influence of the loss of a considerable portion of our export market for farm products on the one hand and the stimulating effects of improving domestic consumer demand on the other have resulted in little change since June in the average level

of prices received by farmers. Improving consumer demand, however, has been reflected in higher farm prices for some of the important farm products which are largely consumed domestically, particularly dairy products and hogs.—P. H. BOLLINGER.

PRODUCTION: Average

Plus signs appeared in the August estimates of production of many of the principal crops this year compared with last. These include wheat, oats, flaxseed, rice, grain sorghums, hay, peanuts, and vegetables. Minus signs appeared against corn, cotton, tobacco, sweetpotatoes, sugarcane, sugar beets, apples, peaches, and grapes. The Crop Reporting Board said that "aggregate crop production is expected to be about average, and considering stocks on hand, supplies of most crops will be ample."

The Board added: "One of the outstanding features of the crop situation this season is the prospect that the general level of crop yields again will be much above average, even though not quite equal to the exceptionally high yields of the last three seasons. Most of the increase appears to be the result of an upward trend in the yields (per acre) of a number of leading crops, particularly cotton, corn, tobacco, beans, and potatoes, due to technological improvements, new varieties, changes in cultural and fertilization practices, and shifts of acreage to higher yielding areas."

PRICES: Higher

The Government index of prices of farm products was 96 for August, compared with 95 in July, and with 88 in August last year. Prices of dairy products, eggs, and citrus fruits advanced during the past month,

but there were substantial declines in prices of potatoes and apples, and smaller decreases in grain and cotton.

Prices of most farm products were higher in the first 8 months of this

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1939			
June.....	89	120	74
July.....	89	120	74
August.....	88	119	74
September.....	98	122	80
October.....	97	122	80
November.....	97	122	80
December.....	96	122	79
1940			
January.....	99	122	81
February.....	101	122	83
March.....	97	123	79
April.....	98	123	80
May.....	98	123	80
June.....	95	123	77
July.....	95	122	78
August.....	96	122	79

¹ Ratio of prices received to prices paid.

year compared with last. Hogs were the principal exception. Hogs may do better after the turn of the year when marketings decrease. It is expected that during the remainder of this year, the average of prices of all the principal farm products will be maintained around current levels.

INCOME: Increase

Farm income usually rises sharply this month as the new cotton crop goes to market and the totals for meat animals are increased. Peak of income from all commodities is usually in October. The October average in the last 4 years was approximately 1 billion dollars. Income was probably higher this August than last, but total for the last 4 months of the year—September through December—may be about the same as in 1939. Total consists of cash from marketings, commodity loans, and Government payments.

A preliminary estimate by BAE is that cash farm income will total about

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5 year average, August, 1909-July 1914	August average, 1909-13	August 1939	July 1940	August 1940	Parity price August 1940
Cotton, lb.....	12.4	12.3	8.70	9.54	9.23	15.75
Corn, bu.....	64.2	70.9	45.7	63.1	63.1	81.5
Wheat, bu.....	88.4	89.5	54.5	61.4	60.1	112.3
Hay, ton.....	11.87	11.35	6.77	7.10	7.10	15.07
Potatoes, bu.....	69.7	84.0	69.3	82.1	68.0	81.5
Oats, bu.....	39.9	40.9	25.4	28.3	26.7	50.7
Soybeans, bu.....	(1)	(1)	.64	.73	.67	1.73
Peanuts, lb.....	4.8	4.8	3.39	3.42	3.44	6.10
Apples, bu.....	.96	.72	.66	1.08	.79	1.22
Oranges, box.....	(1)	(1)	1.53	1.50	1.75	2.46
Grapefruit, box.....	(1)	(1)	.89	.94	1.35	1.54
Lemons, Calif. box.....	(1)	(1)	2.20	1.95	2.90	2.49
Beef cattle, cwt.....	5.21	5.08	6.50	7.26	7.21	6.62
Hogs, cwt.....	7.22	7.30	5.47	5.78	5.83	9.17
Chickens, lb.....	11.4	11.7	13.0	13.6	13.4	14.5
Eggs, doz.....	21.5	18.1	17.5	16.4	17.2	25.5
Butterfat, lb.....	26.3	24.1	22.4	25.9	20.7	31.1
Wool, lb.....	18.3	18.8	22.0	27.9	27.3	23.2
Veal calves, cwt.....	6.75	6.59	8.13	8.56	8.59	8.57
Lambs, cwt.....	5.87	5.51	6.94	7.85	7.52	7.45
Horses, each.....	136.60	137.30	78.00	74.50	72.50	173.50

¹ Prices not available.

² Adjusted for seasonality.

³ Revised.

⁴ Post-war base.

8.9 billion dollars in 1940. This figure is about 360 million dollars—5 per cent—higher than in 1939. It would be the second largest for any year since 1930. Highest was 9.1 billion dollars in 1937. Livestock and livestock products will yield a larger part of the gain than crops in 1940 compared with 1939.

The following table gives totals for July (last month of record), and cumulative figures January–July, with comparisons:

Month and year	Income from market-ings	Income from Government pay-ments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
July:			
1940.....	668	35	703
1939.....	605	36	641
1938.....	647	34	681
1937.....	811	11	822
January–July:			
1940.....	4, 082	445	4, 527
1939.....	3, 723	450	4, 173
1938.....	3, 837	291	4, 128
1937.....	4, 328	341	4, 669

COTTON: Outlook

BAE says that the outlook for domestic consumption of cotton continues unusually favorable, with the 1940–41 season expected to exceed the near-record high of 7½ million bales consumed in 1939–40. But export prospects continue exceptionally unfavorable—in Great Britain, Japan, and China, three of the most important markets now open to American cotton, mill activity has recently declined considerably. Exports totaled only 51,000 bales last month, as contrasted with approximately 5 times this quantity in August 1939.

United States supply of cotton—new crop (as estimated in September) plus carry-over—is approximately 1½ million bales smaller this year than last. Total is about 23 million bales.

Principal supports to prices are the continuing high rate of domestic consumption and the Government loan program. Government loan rates

on the 1940 crop range (for Middling 1½" on a net weight basis) from a high of 9.90 cents in the Carolina mill areas to 9.16 cents in west Texas and New Mexico. Rates on a gross weight basis are 0.40 cents less. Compared with last year's minimum loan of 8.30 for Middling ¾" on a gross weight basis, the minimum this year will be 8.51 cents.

WHEAT: Supply Up

United States wheat supply estimate has been raised to 1,045 million bushels for 1940–41. This includes the 1940 crop plus carry-over. The supply for 1939–41 was 1,007 million bushels. A break-down of the 1940–41 supply shows 421 million bushels of Hard Red Winter, 241 million of Soft Red Winter, 225 million Hard Red Spring, 53 million Durum, and 105 million bushels of White wheat.

Domestic disappearance of wheat is expected to be about 700 million bushels in 1940–41. This would make about 345 million bushels available for export, or for carry-over on July 1 next. Export prospects for 1940–41 are not good. Exports in 1939–40 totaled about 45 million bushels. Prices of wheat in late August were about the same as at that time in 1939, supported principally by the Government loan program.

Acreage allotted for seeding the 1941 crop under the Agricultural Adjustment Act was announced at 62 million acres, the same as the 1940 allotment. Actual seedings totaled 64.4 million acres in 1940. Average yields on a similar area in 1941 would total about 750 million bushels of wheat. This would be about 50 million bushels in excess of probable domestic disappearance.

FEED: Ample Supply

BAE estimates total supplies of feed grains for the 1940–41 feeding season based on August 1 conditions at 113 million tons, compared with 118 mil-

lion tons in 1939-40. But the number of feed-grain-consuming livestock will be about 4 percent less than the number last year. This means that total supplies of feed grains per unit of livestock will be about the same as in 1939-40.

The quantity of corn held under seal will be considerably larger on October 1 this year than last. Deducting from the prospective supply of feed grains the probable volume of corn under loan and held by the Government on October 1, the total supply of feed grains will be about 100 million tons, as compared with 111 million last year. Excluding corn under loan, the supply of feed grains per livestock unit will be about 6 percent smaller in 1940-41 than in 1939-40.

CATTLE: On Feed

Considerably fewer cattle will be fed this fall and winter than last, on the prospect that supplies of feed grains will be smaller and corn prices higher. This will mean smaller marketings of grain-fed cattle in the first half of 1941 than in the like period of 1940, and a higher level of prices provided consumer demand for meats is well maintained. The number of cattle on feed in the Corn Belt on August 1 was 3 percent smaller than on that date last year.

The decrease in feeding reflects the unfavorable returns from cattle feeding in the past season, when prices of both corn and feeder cattle were high in relation to prices of slaughter cattle. Prices of corn and other feeds are generally higher than a year earlier, but with prospects for a weaker feeder demand it is expected that prices of stocker and feeder cattle will average not much higher this fall than last.

BAE says it is probable that the spread between prices of feeder steers and slaughter steers will be wider than it was last fall. Marketings of grain-fed cattle are expected to continue large during the remainder of 1940, but no larger than a year earlier in

view of the reported decrease in cattle on feed August 1. Prices of these cattle probably will continue near the levels of recent months, with an advance more likely than a decline.

An increase in numbers of cattle on farms and ranches is expected in the next few years, continuing the upswing which began in early 1938. January 1 figures are likely to show an increase of about 2 million head over January 1 last, and 5 million more than on January 1, 1938. Cattle prices probably will trend downward after 1941, unless there should be a substantial improvement in consumer demand for meats.

HOGS: Reduction

Evidence accumulates that the number of sows farrowing this fall will be at least 12 percent smaller than in 1939. The decrease may be even more, depending on the outturn of the corn crop. In any case, the total production of pigs in 1940—spring crop and fall crop—will be sharply reduced from the 1939 production which was the largest in the 17 years of Government record.

The smaller production this year means a marked reduction in marketings of hogs in 1940-41. A large part of this decrease is expected to occur after November or December 1940. The seasonal increase in marketings from September through December this year may be about as large as the increase in the like period of 1939, followed by a large seasonal reduction in late winter and early spring.

The unfavorable relationship between hog prices and corn prices this summer was reflected in the marketing of lighter weight hogs in August. For the first time in months, prices were higher than at the same time a year earlier. But prices of lard and other fats and oils were weak, reflecting large storage supplies and the loss of European markets. Storage stocks of both pork and lard are considerably larger than at this time last year.

The best elements in the hog situation are the smaller 1940 production of pigs and the prospect for improved domestic consumer demand for meats. A further moderate decrease in pig production in 1941 seems likely.

LAMBS: Record Crop

This year's crop of lambs—32.7 million head—was the largest on record. The increase this year over last—about 3 percent—was principally in Texas, the leading western sheep-producing State. The total crop in the other western sheep States was a little smaller this year than last, whereas in the native sheep States the crop was a little larger.

The increase in total production this year indicates larger marketings in the last half of 1940 compared with the like period in 1939, but prices will be supported by improved consumer demand. * * * Meanwhile, it is indicated that fewer lambs will be fed this fall and winter than last. Supplies of feed grains in the Corn Belt will be smaller, and feed crop production in the lamb feeding areas of western Nebraska and Colorado will be materially less than in 1939.

A factor tending to hold down the number of lambs fed this fall and winter is that for the most part the returns from feeding operations last season were unfavorable for lamb feeders. Up to early August only small numbers of lambs in the western States had been purchased on contract for fall delivery, with very few purchased by western feeders.

RICE: Supply Down

The rice situation was changed in August when southern crops were damaged by Gulf storms. Crop prospects were reduced from August 1 indications that the total supply this year—new crop plus carry-over—would be the largest on record. Prices have been averaging higher than at the same time last year. The higher prices of

rice during the summer—notwithstanding the prospects for large supplies—apparently reflected an improved consumer demand. Total exports and shipments of rice from continental United States were a little larger in 1939-40 than in the preceding year.

FATS, OILS: Output

Factory production of fats and oils was 11 percent larger in the first 6 months of 1940 than in the first half of 1939, and apparently was the largest on record for this period. Increased output of lard, tallow, greases, and soybean oil accounted for most of the gain. Imports of fats and oils were smaller, and exports larger, in the first half of 1940 than a year earlier. Stocks of fats and oils on June 30 were unusually large.

BAE says that improvement in industrial activity resulting in part from increased defense expenditures will be a factor tending to strengthen the demand and prices for domestic fats and oils. It is emphasized, however, that large supplies of most fats are available in the United States and other primary producing countries, and that prices are not likely to show any major gain unless continental European markets are reopened to world trade.

POTATOES: Improvement

The potato market situation is expected to improve now that the heavy marketings of the intermediate crop have been completed. The intermediate crop totaled about 35.4 million bushels, compared with 27.6 million bushels in 1939. The late crop now being marketed has been indicated at 290 million bushels, or about the same as in 1939, but about 6 million less than the average for the 10 years 1929-38.

Late potato crop supplies are likely to be larger this year than last in the

Eastern States, but smaller in the Western. The supply in the Central States is expected to be about the same as in 1939. BAE says that with somewhat higher consumer purchasing power in prospect for the whole of the 1940-41 marketing season, the late potato marketing season is likely to be slightly more favorable to growers than that of 1939-40.

TRUCK CROPS: Supply

In late August it appeared there would be ample supplies of most of the commercial truck crops for fall markets. Production of late onions in the northern States was indicated at about 15 percent smaller this year than last, and of lettuce, cantaloupes, and tomatoes 2 to 3 percent less. Most of the other late crops were expected to be in somewhat larger supply than in 1939.

A domestic cabbage crop (part of this is usually used for kraut manufacture) about a third larger this season than last was indicated in the late States, and it was reported that the late Danish type acreage would be about 3 percent larger. Market garden areas in northern States were providing considerable quantities of fresh vegetables in August. The general level of prices of truck crops early in the month was slightly higher than at the same time last year.

Larger crops than a year earlier of vegetables for processing were being harvested. Contract prices were slightly higher than in 1939.

FRUITS: Ample Supply

Total production of fruits will be slightly smaller this year than last, but the supply available for fresh market during the 1940-41 season will be about the same on account of reduced exports, canning, and drying. It is estimated that a decrease of about 12 percent in production of deciduous fruits will be offset in part by larger

crops of citrus. Prices of most fresh fruits were averaging higher this August than last—notably the prices of early apples, peaches, and citrus.

Production of apples in 424 commercial counties the country over was indicated at 117 million bushels, compared with 143 million in 1939, and with 122 million average in the 5 years 1934-38. The peach crop in the 10 early States turned out to be larger than had been expected, total production of pears was indicated at 31.4 million bushels, compared with 31.0 million in 1939, and of grapes at less than 2.5 million tons, compared with slightly more than this quantity last year.

MILK: Higher Priced

Farmers have been averaging slightly higher prices for milk this summer than last. Principal reason has been the better consumer demand for milk and for manufactured dairy products. This situation is expected to continue during the remainder of this year. Milk production during the last half of 1940 may set a new high record for this time of year, but consumer demand is expected to average higher than in the last half of 1939, and exports of dairy products are increasing,—notably of evaporated and condensed milk.

Milk production in the first 6 months of 1940 totaled slightly more than 57 billion pounds, or about 1.5 percent more than in the like period of 1939. Most of the increase went into manufactured dairy products. Production of butter, cheese and canned milk—combined—in the first 7 months of 1940 was 3 percent larger than in the like period of 1939. These developments reflect a marked increase in the foreign demand for concentrated milks, and a reduction in United States imports of cheese. Total imports of cheese during the first 7 months of this year declined by more than 5 million pounds.

EGGS, POULTRY: Up

Prices of eggs are expected to average higher this fall and winter than last. Production will be smaller, consumer demand should be better. Discontinuance of Government buying of eggs was announced in late August. About the same number of layers are on farms as at this time last year, but there are 10 percent fewer pullets to replenish laying flocks. Laying flocks will be about 5 percent smaller this winter than last, the exact decrease depending on prices of eggs and feed during the next few months. The feed-egg ratio from the producer's

viewpoint probably will continue less favorable than the 10-year average during the remainder of this year.

Higher prices of chickens also are expected, reflecting smaller supplies of chickens, higher consumer incomes, and the generally favorable chicken-storage deal of the past season.

* * * Not so favorable is the outlook for turkeys. Production of turkeys is smaller this year than last, and consumer demand should be better; but stocks of turkeys still in storage are the largest on record and last season's turkey-storage operations were unprofitable.

—FRANK GEORGE.

INCOME FROM MEAT ANIMALS

Cash farm income from meat animals totaled 2,276 million dollars in 1939. This compares with 2,175 million in 1938, and with 2,330 million dollars in 1937. Except for 1937, the income from meat animals in 1939 was the largest since 1930 when the total was 2,480 million dollars.

Practically all of the increase during the past year was in income from cattle and calves. A slight increase in marketings and an average gain of 50 cents per hundredweight received by producers for these animals raised the 1939 income to 1,275 million dollars as compared with 1,144 million in 1938. The 1939 total for cattle and calves was the largest in more than a decade.

Income from hogs totaled 821 million dollars in 1939, compared with 869 million in 1938. Marketings of hogs had increased during the past year, but farm prices averaged \$1.50 lower than in 1938. Income from hogs has declined steadily in the last 3 years, but the total for the last year

of record was nearly double the low figure of 445 million dollars in 1932.

Cash farm income from sheep and lambs was higher in 1939 than in 1938, and except for 1937 was the largest in 10 years. As in the case of cattle and calves, and hogs, the 1939 income from sheep and lambs was approximately double the low for the decade. The accompanying table gives totals and components by years for the decade.

Cash Farm Income From Meat Animals, 1932-39

Year	Cattle and calves	Hogs	Sheep and lambs	Total all meat animals ¹
	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>	<i>Mil. dol.</i>
1930.....	1,184	1,136	161	2,480
1931.....	838	774	130	1,742
1932.....	621	445	93	1,158
1933.....	899	824	104	1,828
1934.....	815	821	131	1,667
1935.....	1,062	671	156	1,889
1936.....	1,098	965	170	2,233
1937.....	1,215	923	192	2,330
1938.....	1,144	869	162	2,175
1939 ²	1,275	821	180	2,276

¹ Total unrounded numbers. ² Preliminary.

Agricultural World of Tomorrow

IMPORTANT technological developments in the years to come seem reasonably certain to lead to a number of primary changes in American agriculture. These changes include a continued rapid increase in the adoption of tractors, especially the small general-purpose tractor with rubber tires. A further use of small combines, corn pickers, and other harvesting and tillage equipment operated with tractors is also in the picture. There will be a rapid extension of rural electrification, especially if support of the Rural Electrification Administration is continued as in 1940.

Other changes include a slow but constant improvement in the productive efficiency of livestock, and progress in the correction of nutritional deficiencies and in disease control. A tendency toward considerable increases in corn production is apparent as a result of further adoption of hybrid seed. Some increase in the production of wheat and oats is likely as a result of wider adoption of new disease-resistant varieties. Greater acreages of soybeans for seed production are in prospect, resulting partly from better seed-yielding varieties, partly from improved methods of harvesting, and from the development of new industrial outlets.

EXTENSION of flax and grain sorghums into new producing areas as a result of the breeding of cold-resistant and hardy varieties is a part of our agricultural economy of tomorrow. Another is the continued shifting from small-grain and tillage crops to forage and pasture in the interest of soil conservation; also, a continuation of the shift from low-yielding to high-yielding hays. Greater use of cover crops and other cultural and engineering conservation practices may be expected; and some increase in the production of corn and cotton as a result of greater use of cover crops in the South.

Techniques in the production and distribution of farm products have changed greatly in the last 20 years. New varieties of crops and breeds of livestock have been developed; many of the processes of production and distribution have become mechanized. Many of the present-day problems in agriculture stem from these developments.

Techniques will change more in the years to come, and with continuing far-reaching effect upon our national economy. What will be the extent of these developments? What their possible economic and social effects? How cushion or minimize their possible adverse effects? How distribute their beneficial ones?

A comprehensive study of these questions has been made during the past year by an Inter-bureau Coordinating Committee consisting of representatives of all the directly interested bureaus and agencies of the United States Department of Agriculture. This issue of "*The Agricultural Situation*" contains a group of articles abstracted from the Committee's report, "Technology on The Farm," published by the Bureau of Agricultural Economics.—Ed.

Other prospective changes include an expansion in the use of domestic wood pulp and increased attention to forests and wood lots as sources of supplementary income for farmers. Greatly increased use of frozen packing of farm products is likely, and continued advances in the production of synthetic textile fibers are expected. Wider outlets and use of both the edible and the drying oils, and development of starch production from sweet-

potatoes on a commercially important scale are additional possibilities. Some development of plastics and other industrial products from cellulose and protein—using mostly wood as the source of cellulose, and soybeans and casein as sources of protein—are other possibilities.

EXPECTED shifts in tenure and income raise difficult questions, since these entail loss of position and income and a progressive piling up at the lower end of the social scale—and that most likely in areas of lowest agricultural productivity, where the existing population is already in excess. This intensification of population pressure is certain to accelerate population movement. There will be an increased tendency to migrate between rural areas and between rural and urban areas. Machines alone are expected to displace 350,000 to 500,000 additional farm workers.

The important (but not new) problem of maintaining farm prices and income will be intensified by the expected technical developments. Significant increases of crops and livestock cannot come without serious repercussions upon costs, prices, and income of all farmers, but especially commercial producers. These changes, furthermore, will not take place uniformly throughout the country.

Another effect is due to the influence of mechanization upon size of farm and the relation of this to the availability of farms for tenants. A few years ago, a farmer upon retirement would go to a town and rent his farm as a unit to a bona fide tenant, but now he is more likely to stay on the farm and rent it by fields to his neighbors, who thus

increase the size of their operating units. Machines help them operate the additional acreage practically as efficiently as if it were a definite part of their home tracts. They stand to enlarge their operations and incomes thereby, but there is one less farm for some other tenant.

Closely related to this development is the influence of mechanization and acreage adjustments upon the shift from a position as tenant and sharecropper to one as wage hand. The problem may become even more intensified in the next few years.

IN the absence of a large defense program, industrial opportunities would not be likely to be of such magnitude as to absorb anything like the present industrially unemployed, to say nothing of absorbing the large excess of manpower on the farm. Nor are the prospects much brighter for the years ahead. A prolonged European war might alter this prospect, but only temporarily. A short war, on the other hand, might make it even darker. Even when peace is declared a period of years will be required to overcome the maladjustments resulting from the war. There will be extreme competition among all nations for world markets. Because of the major importance of foreign markets to the prosperity of the bulk of our agricultural producers, it appears that agriculture as a whole will be affected particularly by this situation. Agriculture will be benefited, however, to the extent that our domestic industrial economy can be made to function more effectively through expanded production, lower prices, and increased employment.

Technology . . . is a social and economic force that challenges thought and ability to plan, because its many-sided nature combines the intricate influences of getting and spending, savings and debts, employed leisure and unemployed relief.

—BAE Report "Technology on the Farm."

Problems of Mechanization

IN a few years striking advances have been made in the use of farm machinery. Reasons for these changes are many. Competition within their own areas and with other sections of the country led many farmers to use machines. Some bought equipment to keep sons on the farm. Borrowing and going into debt was easy. Some sought a release from routine. For some, machinery meant independence from hired labor, an attempt to lower production costs, increased efficiency, and greater marketable production.

The years of expansion, new frontiers, virgin lands, easy money, free spending, high prices, ready employment, and drives for greater production brought tractors, new cultivators, harvesters, and other mechanical aids to farming. The most important of these is the tractor. From the heavy, cumbersome machine, limited to draft work and certain belt operations, the trend has been to lighter, higher-speed tractors adapted to various uses. Further modifications in design are expected; the immediate future is likely to bring greater use of small tractors on small farms.

AN estimated 1,626,000 tractors were in use in the United States in 1939—almost double the number reported in 1930. Three-fourths of all tractors sold in the United States in 1937 were general-purpose tractors; it is probable that 50 percent of all tractors on farms in 1940 are of this type. A growing proportion has rubber tires. Probably 60 percent of American farms large enough for motor equipment are using tractors this year.

The largest use of tractors is in the small-grain areas, the Corn Belt, and specialized sections such as the dairy, truck, and orchard areas of the Eastern and Western States. In the Southern and Eastern States, small farms and low incomes have not favored the purchase of tractors, but some large specialty farms have been mechanized.

The small, all-purpose tractor should increase the rate of mechanization of small farms in these regions. This machine, also adapted to the small farms of the North Central States, may offset a tendency there to combine and enlarge family-operated units. In the small-grain areas, more nearly mechanized than any other, the small tractor may displace horses on small farms.

It seems conservative to assume that a continuation of present conditions would result in an increase of about 500,000 tractors by 1950. A considerable slowing down of tractor adoption in the North Central and North Atlantic States and an acceleration in the other regions are indicated on the basis of a more rapid acceptance of the new small tractors in areas of smaller farms.

More farmers could buy tractors in a shorter time if prices of farm goods stimulated adjustments in the type of farm power as an aid to increased production. On the other hand, low farm incomes or greater restrictions on the use of cropland would slow down the rate of adjustment.

THE combined harvester-thresher is the most important development in harvesting equipment. New types are adapted to harvesting grass seeds, soybeans, and small grains. Less than 5 percent of the wheat crop was harvested with combines in 1920, but approximately 50 percent of the crop was "combined" in 1938. The "baby combine," introduced in 1935, cuts a swath 5 or 6 feet wide, is driven by a power take-off from a tractor, and can be operated by one man, at 4 to 5 miles an hour under favorable conditions.

The "midget" combine, that cuts a 40-inch swath and is operated by one man, came into use in 1939, primarily on small farms. It costs little more than a grain binder, is built for speed in operation, and may give to the small farmer an advantage in harvest costs

heretofore held by operators of large holdings. In 1939, 80 percent of the combines sold were 6 feet or less in width.

Mechanical corn pickers on the market in 1940 seem to be economical only for harvesting large acreages, but a simplification of design to lower the initial cost may extend greatly their use. A small, low-cost picker would tend to discourage the concentration of corn acreage in large units. With a two-row picker and modern facilities for hauling and cribbing corn, yields of 60 to 70 bushels an acre can be harvested with only $1\frac{1}{2}$ to 2 man-hours an acre. Hand picking and scooping would require 9 man-hours to harvest a 70-bushel yield.

More than 800 patents have been taken out on cotton harvesters, but none (except that of the stripper type) is considered beyond the experimental stage.

SCARCELY more than 100,000 rural homes received current from electric power lines in 1919, but by June 1940, service had been extended to approximately 2 million farms, or about 29 percent of American farms. The proportion of farms receiving current at the end of 1939 varied from 78.5 percent in the Pacific States to 10 percent in the West South Central States.

Some 250 farm uses of electricity have been listed. The total annual amount has been apportioned in this way: 40 to 50 percent for irrigation; 30 percent for household appliances; 20 to 30 percent mainly for lighting barns, yards, and out-buildings, but some for small equipment like pumps, chick brooders, and milking machines.

Rural electrification has been rapid, the number of farms receiving electricity increasing about 25,000 a month. At this rate, all the farms in the United States would be electrified within 15 to 20 years. However, the sparseness of population and the extremely low incomes of farmers in

some areas may prove to be obstacles to electrification, unless financial aid is granted to farmers in such areas. Nevertheless it seems reasonable that a total of 3 million to 3.5 million farms—45 to 50 percent of all farms—will be receiving electricity from power lines within the next 10 to 15 years.

BETWEEN 1915 and 1939, motor equipment displaced nearly 10 million horses and mules on farms. This reduction of work stock released, either for direct sale or for the feeding of other livestock, the products of some 30 million acres of cropland and 15 million acres of pasture. A continuation of the downward trend in horse numbers must be expected.

A recent study estimated one tractor had taken the place of two and one-half horses. Such displacement tends to be directly proportional to size of farms and size of tractors. But fewer working livestock would mean fewer horse and mule colts, and the total reduction in numbers of horses and mules would probably be about three head per tractor.

On this basis, an increase of 500,000 tractors in the next decade would replace approximately 1.5 million head of horses and mules. On the basis of estimated feed requirements of horses and average yields in 1928-32, the acreage thus released for uses other than production of horse feed would approximate 3.5 million acres of grain crops, 2.3 million acres of hay, and 2.4 million acres of pasture. Roughly, the volume of production to be diverted would be the equivalent of 56,000,000 bushels of corn, 20,000,000 bushels of oats, 2,660,000 tons of hay, and 91,000 tons of other concentrated feeds.

Too few colts were being raised in 1940 to sustain even the number of work stock that would be needed after the estimated 1.5 million head had been replaced by tractors.

MECHANIZATION may be expected to increase somewhat the total investment in equipment on farms compared with the investment that would be required if horse operations were maintained. This will mean an increase in the fixed costs of the farms making such shifts. The changes in equipment, however, are likely to have less important effects on the total farm investment. In 1930, the value of land and buildings made up 84 percent of the value of farm property. Machinery represented only 5.8 percent of the total valuation. Tractors, trucks, and automobiles reduce the number of horses and displace horse equipment; therefore, they do not increase farm investment in proportion to their total cost. For instance, the investment in tractors and equipment on a mechanized cotton plantation of 950 acres would be approximately the same as the investment in mules and mule equipment for operating with animal power. On small farms mechanization would probably increase the investment; the amount depending on the number of animals that could be displaced.

Mechanization in the North Central States has apparently increased the investment in equipment and power. On farms of 135 to 174 crop-acres using horse power in 1937, the investment in power and equipment averaged \$1,640, and on farms of the same size group using general-purpose tractors the investment averaged \$2,192. Part of this difference can be accounted for by the tendency to have newer and more expensive equipment on farms using tractors, and by the likelihood that some horse-drawn equipment was still carried in the inventory.

More important than the actual increases of investment in equipment for the ordinary farm is the fact that farming an acreage less than that efficiently handled by a particular set of equipment leads to excessively high machinery costs.

IT is estimated that 350,000 to 500,000 farm workers will be displaced in the next decade, but the number of workers displaced by mechanization depends not only on the type of equipment but also on the kind of farm. Displacement is not necessarily in proportion to the time saved on a specific job. On large farms operated with a flexible supply of hired labor, equipment that reduces the time of performing work by half may at the same time reduce the working force by half. But on the family farms the labor force represented by members of the family may not be reduced by labor-saving equipment. Less additional labor may be hired, but the actual reduction of workers would be considerably less than the working time saved.

The influence of changes in equipment on the use of labor is more apparent when it is expressed in terms of the labor required to handle crops with different sets of complementing equipment, or in terms of the labor required to operate a farm of a given size and type with different sets of equipment. For instance, with the machinery and power in common use in the central winter wheat areas about the year 1900, the approximate time to prepare land, seed, harvest with a binder, shock, thresh, and haul wheat to the granary was 8.8 hours per acre. With the use of a tractor, tractor equipment, and a 12-foot combine, the time for comparable work was reduced to 3.3 hours. The time required for corn production in the Corn Belt was reduced from 15.1 hours to 6.9 hours an acre.

In the Corn Belt a shift to tractors, and to some extent to combines, reduced labor requirements for wheat nearly 5 hours an acre. One of the factors influencing the reduction in man-hours used per acre of other important crops is a gradual shifting of production to areas where less labor is used. This has been most pronounced in wheat and cotton.

NO mechanical developments now under way seem likely to affect the use of labor in the near future as drastically or on as large a scale as did developments in wheat machinery in the 1920's. However, perfection and adoption of the cotton picker or the use of sugar-beet tillage and harvesting machinery would have effects comparable to the recent mechanization of wheat production.

Although the small tractor placed in service on a livestock or general farm would reduce the time required for field labor, the usual adjustment of increasing the numbers of productive livestock as work stock are displaced would tend to maintain the total amount of labor used. Labor displacement in cash corn areas seems likely to continue, and in the cotton areas it may be large in proportion to the degree of mechanization.

The traditional plantation and sharecropper systems of farm organization in parts of the South are passing even without the mechanical cotton picker. Prices of cotton and wages of labor have given an income advantage to the operators using hired rather than share labor. The result has been an increase in the proportion of cotton grown with wage labor. This has been particularly true where additional economies in cost of operation could be achieved through the use of wage labor and power machinery.

On the plantations shifting toward mechanization during 1932-38, 36 tractors were put into use for each 10,000 crop acres; 91 families, or 22 percent of the original number, were displaced from 10,000 acres of cropland. The second group, on which tractors per 10,000 crop acres increased from 18 in 1932 to 24 in 1938, displaced 65 families, or 16 percent. The third group, on which tractors were not

used, displaced 22 families, or 6 percent.

The introduction of tractors in the South will release for other purposes land that has been used for corn, hay, and pasture for mule feed. Most of this land has grown corn. It may continue to grow feed for other livestock, but some of it may be shifted to cash crops. The relative profitableness of the different alternatives and the extent to which special inducements are provided for shifting will determine the choice.

FURTHER adoption of tractors and complementary equipment in the North Atlantic States will release land formerly used to produce feed for work stock and make it available for other uses. In view of the importance of dairying and the relative shortage of feed crops, it seems likely that a large part of the released land will be used to produce feed for dairy cattle.

The probable shift to more dairy feed resulting from mechanization must also be relative to the adoption of soil-improvement practices. The agricultural conservation program appears to have encouraged dairymen to step up the normal rate of adoption of soil-improvement practices. In other words, the conservation program seems to be hastening a desirable adjustment, but it is an adjustment which means more dairy feed. Increased use of lime and fertilizer is bound to affect hay and pasture yields over a period of years.

What are the implications of such changes? Will it mean too much milk? Will farmers really adjust their rations to take advantage of increased home-produced feed? Perhaps not, for some recent farm records indicate that dairymen are slow to adjust their purchases of grain when more roughage is available.

Plants and Production

CORN is the most valuable of all farm crops in the United States. Hybrid corn, with its additional security against low yields and crop failure, is an outstanding achievement. In 1933, about 40 thousand acres were in hybrid corn in the United States; 6 years later approximately 24 million acres were grown—roughly one-fourth of the national corn acreage. About 55 percent of the total corn acreage in Ohio and Illinois and 75 percent in Iowa were in hybrids in 1939.

Probably 80 to 85 percent of the corn acreage eventually—perhaps before 1950—will be planted to hybrids in the Corn Belt. Further expansion will be limited by low soil productivity in some areas where the hybrids have too slight an advantage over open-pollinated corn. In parts of the Great Plains where yields are limited by too little moisture, the returns from hybrids may not justify the extra expense. All factors considered, the grain sorghums are more dependable for some of these places.

The development of corn hybrids for the South has not been neglected, but those now under trial may not be ready for extensive distribution among southern farmers before 1945. Rather slow adoption of hybrid corn in the South seems to be indicated because of the greater cost, relatively low yields, and the fact that corn is not a southern cash crop.

AN important characteristic of hybrids is their increased productivity, for yields sometimes exceed those of open-pollinated varieties by 15 to 30 percent. Another is increased "standability," of especial value when mechanical corn pickers are used. Some hybrids resist disease, and several are somewhat immune to chinch bugs and corn rootworm. Plant breeders estimate increases in yields of 15 to 20 percent from using hybrid seed under field conditions.

If hybrid corn were planted on 80 percent of the corn acreage of the North Central States and 40 percent of the corn acreage elsewhere, and the hybrid yields exceeded yields of open-pollinated varieties by 15 percent, the corn production would be 273 million bushels greater than production calculated by multiplying the average yield of 1923-32 by the average harvested acreage of 1928-32. If the 1939 harvested acreage is used and the other assumptions remain the same, the corn crop would be 221 million bushels greater.

On the basis of the corn acreage harvested in 1938, or the smaller acreage in 1939, it seems conservative to estimate that the use of hybrid seed will add at least 220 million bushels to our total corn production. Perhaps a little more than half of this increase has already been obtained.

IMPROVEMENTS in wheat have served to meet an increasingly unfavorable situation; wheat yields and quality have been maintained despite depleted fertility, increasing pests, and extension of production into high-risk areas.

An outstanding achievement has been the development of Thatcher, a hard red spring wheat that possesses greater resistance to stem rust than other varieties. Grown on some 20,000 acres in 1935, it was found to be less susceptible to stem rust than either Marquis or Ceres in the epidemics of 1935 and 1937. Thatcher wheat has become extremely popular; some persons are of the opinion that the acreage planted to Thatcher in the next few years will fluctuate around 6 million acres, or approximately one-third of the spring wheat acreage. On the assumptions that 2 or 3 severe epidemics of stem rust will occur every 10 years and that Thatcher will yield, as an average for all years, 1.3 bushels an acre more than Ceres and 3.3

bushels more than Marquis, the substitution of Thatcher wheat on 6 million acres would result in an annual increase of 10 million bushels.

SOYBEAN production for seed has grown phenomenally. It is one of the most promising crops from the standpoint of furnishing raw materials for industrial uses.

The soybean was introduced into the United States in 1804, but received little attention for a century. Only 50,000 acres were grown in 1907. The recent rapid increase may be attributed to the development of high seed-yielding varieties, to improved harvesting equipment, and to new industrial outlets for the product.

The North Central States led in soybean production in 1939. An addition to the soybean acreage in these States would mean a reduction in the acreage of other crops—particularly of oats, wheat, and corn—to an extent that depends upon the relative profitability of each crop. Soybeans may not displace any material acreage of corn in the Corn Belt, unless such a shift is induced by agricultural programs, but there is a strong likelihood that they will displace some wheat and oats. Increases of 15 million to 20 million bushels above 1939 soybean seed production could easily take place. Farmers in these States have sufficient power and machinery to handle more acres of soybeans, and oil and oil-meal processing plants are available as outlets.

THE most important development in cotton improvement is standardized production in single-variety communities—a procedure whereby all farmers of a locality grow one improved strain of cotton. In 1939 there were about 1,500 single-variety communities; these accounted for approximately 13 percent of the cotton crop. Yields in some single-va-

riety communities have been increased as much as 40 to 50 pounds of lint to the acre, although a part of such increases is due, of course, to better cultural practices and better seed.

Recent experimental work has established flax production in California and Texas. Punjab flax, grown chiefly in the Imperial and San Joaquin Valleys of California, has displaced some cotton since 1935; in 1939 about 100,000 acres of this flax produced some 2 million bushels of seed. About 17,000 acres of fall-sown flax were grown commercially in Texas in 1938-39, chiefly near the Gulf coast in the triangle represented by Houston, San Antonio, and Brownsville.

IT is expected that the supply of grains will increase. No doubt the additional corn production resulting from the use of hybrid seed in the Corn Belt was a factor in bringing about the need for a lower allotment acreage in corn for 1940 in the Agricultural Adjustment Program of the Department of Agriculture. Reduction of the corn acreage may offset the potential increase in production resulting from hybrid corn and thus assist the corn-loan program in maintaining corn prices—but the effects of hybrid corn are not entirely removed. Further reduction of the acreage in corn will free additional acreage for soil-conserving crops or pasture.

The total supply of roughages will increase and the prices of roughages relative to corn prices may decrease. Roughage-consuming livestock under these conditions probably will receive more roughage and less grain, and the production from this type of livestock will tend to expand relative to the acreage in corn. If the demand for livestock products does not expand with the new livestock production, the prices received by farmers for these products will tend to fall.

The maintenance of corn prices at too high a level as the prices of live-

stock and livestock products decline accentuates the substitution of cheaper feeds for corn, and may bring forth

new ways of making livestock production more efficient in the use of grain.

Changes in Animals

AMERICANS have changed their mode of living. They have new appetites and knowledge of nutrition. Their work has become more sedentary and less physical, and permits the use of food of lower caloric value. Reducing diets have cut the farmer's market for animal fat. Kerosene was substituted for tallow candles and in turn is being replaced by electricity. Hydrogenated vegetable oils compete with lard. Smaller families have meant a smaller demand for large roasts and large turkeys. Hogs and cattle are bred and fed so they will have more lean meat and less fat.

These are but some of the changes in market requirements and, indeed, in animals themselves; in addition new and basic techniques have been developed. New knowledge of pests and germs and minerals is widely used in controlling animal diseases. Research in animal feeding is directed toward learning the importance and use of vitamins, minerals, forage, pasture, hay, and silage in rations and the effects of processing and storage on feeds. Much of this work has preceded studies in human nutrition. Some areas are known to lack iodine, calcium, phosphorus, cobalt, copper, or iron, and methods have been devised for correcting these deficiencies.

ACOOPERATIVE campaign inaugurated in 1917 to eradicate tuberculosis among livestock has been highly successful. Nearly all dairy and breeding cattle in the United States have been tuberculin tested. Paratuberculosis, Bang's disease, and mastitis are the most important diseases affecting American cattle. No

satisfactory control methods, except testing and slaughter, have been devised. Sometimes even this method has failed, mainly because of inadequate tests. The campaign against the cattle fever tick has succeeded in reducing the area under Federal quarantine to 15,000 square miles in Florida and Texas, compared with approximately 700,000 square miles under quarantine in 1906, when the campaign was undertaken.

Progeny testing has been most widely used with dairy cattle. Production records were kept on about 2½ percent of all dairy cows in the United States in 1939. Since 1927, dairy herd improvement association records have been used to prove sires; since 1936, the practice has been expanded and made more accurate.

ALTHOUGH the droughts of 1934 and 1936 reduced the production of milk, the estimates reveal a fairly consistent upward tendency in individual production per cow, averaging about 25 to 30 pounds of milk a year. A large part of this gain is probably the result of the heavier feeding encouraged by the higher butterfat prices relative to prices of feed concentrates in most of the post-war years. Progeny testing no doubt will accelerate the upward trend in such production, but its effect will be relatively small until it is widely adopted as a basis for culling.

Poultry breeders use progeny testing to obtain strains of poultry superior in egg production, egg weight, and body weight, but farmers who are not specializing in poultry have found that too much work is required for the necessary trapnesting and record keep-

ing. For other types of livestock, extensive programs of progeny testing remain to be developed. A program to improve swine has been successful in Denmark for more than 40 years, but in the United States the process has been limited to experiment stations and the Department of Agriculture.

CCROSS-BREEDING involves the mating of animals of different breeds or species. Brahman cattle from India are crossed with beef breeds of British origin to get a quality beef animal that can withstand the high temperatures, humidity, and insect infestations along the Gulf Coast. There has been an increasing demand for Brahman cattle in the South. It is estimated that at least 500,000 head—about 20 percent of the cattle along the Gulf Coast area—show Brahman breeding. The greatest technical limitation in cross-breeding beef cattle is the necessity for constant crossing.

Experimental cross-breeding of swine indicates that cross-bred pigs require about 5 percent less feed for the same amount of gain and about 5 percent less time to reach maturity than do pure-breds. At the same time they yield better carcasses. Cross-breeding of sheep of the wool-and-mutton type has produced such breeds as the Columbia and the Corriedale. Because of the change in the relative values of wool and mutton, cross-breeding has increased since 1930. It is estimated that approximately 10 percent of the range sheep were involved in cross-breeding in 1939.

ARTIFICIAL insemination—the act of inserting semen into the female mechanically—permits the use of proved sires on more females. The technique has been well developed, although further improvement can be expected. Effective use requires adequate equipment handled by well-trained operators. The practice is used with various degrees of success among cattle, horses, foxes, sheep,

swine, and poultry. Seventeen artificial breeding associations for dairy cattle were functioning in 1939 in 10 States.

By extending the use of proved sires over several hundred females a year instead of 25 or 50 in a single herd, faster improvement can be made in the quality of the entire livestock population. Because the cost of cooperative purchase of a good sire, added to that of collecting and transporting semen, will tend to offset the amount that farmers otherwise would spend for more sires and for feed, the total cost for breeding probably will not be changed materially. (It should be emphasized that results of the work in livestock improvement affect production rather slowly, and that therefore the necessary adjustments usually can be made as the improvements themselves take place.)

As a result of mechanization, changes in cropping systems and the release of feed crops for meat and milk animals probably will have a much more important immediate effect on the volume of livestock products than the improvements in breeding and care of animals. The latter are effective particularly in enabling farmers more efficiently to utilize, through livestock, the increases in feed produced.

THERE is meager evidence concerning the gains in efficiency from using grains for livestock production and the extent to which the various roughages and feed grains are substituted for each other in feeding livestock. Obviously, the shifting back and forth between grains and roughages is greatest for cattle, particularly beef cattle. Yet a study of the cost of producing hogs in Champaign and Platt Counties, Ill., during 1920-38 shows a greater use of pasture and a decline in the quantity of grain fed for each 100 pounds of live weight produced. The quantity of grain fed for each 100 pounds of live weight fell from an average of 508 pounds for

1920-24 to an average of 434 pounds in 1934-38, while days on pasture increased from 7 to 46. At the same time, proteins fed increased from 7 pounds to 19 pounds.

The quantities of grain fed annually to cattle and horses on Iowa farms between 1923 and 1932 seemed to vary between 40 and 60 bushels per head. Whether there has been a significant increase in the efficiency of feeding grain to livestock for the United States as a whole cannot be clearly determined. If the amount of grain estimated to have been fed during a year to all livestock, including workstock, is related each year since 1909 to the amount of grain estimated to have been required at average rates of feeding for the yearly livestock production, no great change in the amount of feed consumed relative to the requirement is indicated. In other words, the average rate of feeding for all livestock seemed to be about the same in the period 1909-14 as it was during 1937-39.

EXPANSION in the production of roughages is likely to increase the possibilities of substituting roughage for grain. So long as the corn-hog ratio is favorable for the feeding of hogs, a reduction in corn acreages probably will be offset in part by the feeding of less grain and more roughage to roughage-consuming livestock and thus diverting corn either to hogs or to the market.

If the prices of livestock relative to the prices of corn become too low for the feeding of corn, the existence of larger supplies of higher-quality roughages makes all the more possible the shift from corn. If the prices of corn persist at this relatively high level, the total requirement for corn may become less. Roughages will be utilized more effectively in maintaining the same livestock production with less corn. Larger numbers of livestock will be marketed at the weights that give the maximum gain from a given quantity of grain.

Eventually, livestock numbers may be reduced, even if temporarily. It is possible that if high prices of corn are prolonged, the average grain requirement for livestock production may decline. Thus technological developments pose problems for the corn-loan program.

An increase in the production of livestock and livestock products will, of course, exert a downward pressure on prices. There would then be a reduction in their total market value, since the character of the demand for most of these products indicates that a smaller volume of production and sale by farmers gives a larger total return than does a larger volume. Furthermore, the decrease in the rate of population growth intensifies the effects that increases in production will have on price. Although there are unsatisfied demands in our population, some sort of financial assistance may be required to make these demands effective.

THE effects of technological developments in the North Central States will differ greatly as between the effects in the Corn Belt and the Great Lakes dairy areas. The latter are too far north to compete in corn production, and have few alternatives to dairy farming if they are not adjacent to special markets. Hence, they are mainly dependent upon the long-term price outlook for manufactured dairy products. New developments that reduce costs in dairy farming will affect these areas favorably unless lower prices intervene.

Increased dairy production elsewhere (that is not offset by increased demand) constitutes the greatest threat to farm income in the dairy areas of the Great Lakes States. One means of meeting such a threat would be to feed less concentrated feed and relatively more roughage and pasture. Such an adjustment would utilize more effectively the natural competitive advantages of these areas, but the

shift would be accompanied by a definite increase in the quality of the roughage to prevent losses in milk production.

A companion problem is the probable effect of the conservation programs on dairy production in the Midwest, and on the supplies of grain feeds that farmers in the North Atlantic States must buy. Preliminary studies indicate that these programs by themselves will not greatly increase dairy production in the Midwest. In

fact, dairying in the Corn Belt increases more rapidly in depression periods—when corn, hogs, and beef cattle are selling at distress prices. Potentially, the Corn Belt is a formidable competitor in dairy production, but this competition will not become a reality so long as corn, hogs, and beef cattle are more profitable enterprises. Greater competition may be expected from the Great Lakes States which have fewer alternatives.

Industrial Uses of Farm Products

CURRENT developments are adding slowly to the demand for agricultural products in industry, but the value of these developments to agriculture is still largely potential rather than actual. If the national income were to rise, several developments would have greater benefit for agriculture, for the production and consumption of many articles made from farm products would be greater. Besides, it would be feasible to promote many products that cannot profitably be introduced while the national income remains low.

The widespread use of an alcohol blend gasoline for motor fuel would require the use of a large area of land. Conversion costs, however, are far too high to allow competition with gasoline at present prices. Even though raw materials were free, the cost of alcohol would greatly exceed present gasoline prices. Until less expensive conversion techniques are discovered, or until the petroleum resources become scarce, no strengthening of agricultural prices can be expected from this industrial use—that is, in the absence of public subsidy.

EXPANSION of demand for wood-pulp produced domestically seems to be the most important development affecting the demand for cellulose from the farms of the United States. Al-

though domestic pulp has had to face the competition of the low-price, duty-free pulp from Canada and northern Europe, the new pulpwood plants in the South may provide higher prices in that region for wood suitable for pulp.

Agriculture may not be the basic source for textile fibers in the future. Rayon—world production was 1,900 million pounds in 1938, or nearly 60 times the 1920 production—which has replaced cotton in a number of uses, requires cotton linters and woodpulp as a source of cellulose. Nylon may cause much substitution; its substitution for cotton and rayon would directly reduce the demand for agricultural cellulose, and its substitution for silk indirectly may reduce the demand for the cotton produced in the United States, because a reduction in the imports of silk will make it more difficult for Japan to purchase cotton and other products in this country. This, together with the relatively minor substitution of rayon for cotton that is expected in the immediate future, may exert some downward pressure on the prices of cotton.

INDUSTRIAL demand for soybeans has been strong, and outlets probably will continue to expand. The acreage available for soybeans, however, is ample, and a reasonable expan-

sion of demand will probably not cause much increase in price. On the contrary, the production of soybeans may expand greatly at 1940 prices if the prices of corn and competing crops become relatively low, and thus exert a downward pressure on soybean prices.

The United States is the world's largest consumer and producer of fats and oils. The total annual consumption exceeds 9 billion pounds. Recent imports, except for the record year 1937, have averaged about 2 billion pounds a year. Exports of oils and oilseeds have averaged 200 to 300 million pounds, besides oils and fats exported as paint, soap, and finishes on manufactured products such as automobiles and refrigerators.

Approximately 67 percent of the fats and oils consumed in this country is used for food. About 42 percent of the 1938 consumption was of vegetable origin; and of this amount about 70 percent was accounted for by cottonseed, soybean, corn, peanut, and linseed oils.

It is these oils, animal fats excluded, which are most extensively produced on American farms. The products from which they are derived represent cash crops, and changes affecting their production and use are significantly reflected in farm incomes. Developments may come with respect to tung and corn oils, wheat-germ oil, and the uses of castor, sunflower, rape, sesame, and perilla oils. The interchangeability of various fats and oils in food processing and utilization makes it possible to substitute sources of supply when any single oil is not available. Less interchangeability is possible for soaps and drying oils.

TECHNOLOGICAL developments in the vegetable oil industry seem unlikely to increase the total demand for the vegetable oil crops in the next 5 to 10 years. The ease of substitution among the oils prevents the expansion of demand for many vegetable oils.

The possibility does exist, however, of increasing the domestic production of vegetable oils at the expense of imports from foreign countries. An increase in livestock production will add to the supply of fats and oils, and thus there may be some downward pressure on these prices.

Corn is the most important domestic raw material for starch, but only about 9 percent of the crop is used for all industrial purposes, including the production of starch. This apparently low percentage should be expected, for corn is primarily the Nation's feed crop. Sweetpotatoes seem to be a promising source of starch for some uses. Varieties grown primarily for starch have yielded as high as 400 bushels an acre, with 200 bushels representing an attainable average. At the latter figure, the starch production would be about 2,500 pounds per acre, compared with about 1,700 pounds from corn.

CELLULOSE—in the forms of cotton linters, cotton fabric, wood-pulp, paper, wood flour, and the like—is the agricultural material most important to the production of plastics. Proteins, of which casein from skim milk has been utilized in greatest volume, have had secondary importance. Considerable research has been directed to the development of a plastic from lignin-containing materials, such as wood, cornstalks, and sugarcane refuse. Interesting results have been obtained.

A plastic from soybean protein, requiring heat for molding and formaldehyde for hardening, awaits only the discovery of some means to make it fluid enough to be used in injection-type molders; once the means is discovered, this plastic should have commercial importance. There also appears to be a potential market of moderate size for other types of molding compounds containing soybean meal. Interesting plastic materials have been developed by the chemical conversion of lactic acid.

It appears that the recent rapid technical advances in the arts of making and using plastic compositions are likely to lead to continued growth of the plastics industry. The quantity of agricultural products required in such growth, while not inconsiderable, is still relatively small compared with the total supply of the products.

THE continued expansion of the canning of fruit and vegetable juices and the increased use of frozen-packing may have adverse effects upon fresh fruits and vegetables and canned products. Much of the expansion along these lines is merely a substitution of one product for another. The fruit juices tend to be substituted for canned and dried fruits and even for fresh fruits, such as grapefruit and oranges.

Frozen fruits and vegetables substitute for fresh products and for canned goods during the seasons when fresh fruits and vegetables are scarce or high in price. The canned goods packed for the "luxury" trade will probably feel the competition of quick-frozen products, but it is doubtful if there will be much substitution of the higher-

priced frozen products for the canned goods sold to lower income groups.

The prices of canned goods may be depressed, and thus the prices received by farmers whose only outlet is that of the canneries will be lowered. On the other hand, there may be some price stimulation in the areas well adapted to growing vegetables for freezing. This stimulation will probably be in the North. The South would lose a part of its advantage in producing for the off-season, high-price trade.

As frozen-packing becomes more developed and the problems of distribution of such products less difficult, the fresh vegetables of the off-season may have to meet the competition of an effective substitute. Prices then will tend to be lowered in the southern areas of production. The possibility exists, however, that some sort of seasonal price pattern will develop for the quick-frozen goods that will permit the processors to take full advantage of the high prices of the off-season. The development of an "industry consciousness" by the processors may lead to close cooperation in pricing. This would tend to reduce the competition between frozen and fresh products during the winter months.

Effects on Costs and Returns

MOST new techniques and improvements used in farm operations are adopted because it is expected that returns from their use will exceed the additional costs incurred. There is a complicated relationship between the adoption of a given improvement and its effect on farming costs. To analyze this relationship one must distinguish between "fixed" and "variable" costs and between "cash" and "noncash" costs.

The purchase of a tractor represents a large initial investment, and the machine is expected to last for several years. Once this investment

has been made, interest and depreciation represent fixed costs on a given farm; but the purchase of gasoline and oil, and the repairs incident to current use of the tractor, are variable costs in the sense that they vary in amount with the use of the machine. The latter costs are also cash costs of operation during the production period. If payment for the tractor is made in cash, its initial purchase is also a cash cost, but one on which returns are expected over a period of years. If money is borrowed to purchase the tractor, the interest and amortization charges on this debt occur as cash costs of operation.

IT is apparent that a shift from horses to tractors may greatly change the nature of farming costs. Fuel and oil are bought for cash in place of the horse feed produced on the farm. Thus, a larger proportion of the annual costs of farm power is cash, and the farm becomes less self-sufficient in furnishing its power. An improvement like a tractor that represents a large initial outlay and results in a fixed cost for equipment is likely to be adopted more slowly than one that affects only the variable costs, as does the use of hybrid seed corn.

It should be noted, however, that even the substitution of purchased hybrid seed corn for a home-grown, open-pollinated variety increases the cash costs of farm operation. There is also a further difference in that once a new tractor has been bought the fixed cost represented by this investment will retard adoption of a new type of tractor even though it represents considerable improvement in design. The cost of discarding the old machine enters into the calculation.

MECHANIZATION of agriculture may be expected to increase somewhat the total investment in equipment on farms, compared with the investment that would be required if horse operations were maintained. This will mean that the fixed costs of the farms making such shifts will be increased. The changes in equipment, however, are likely to have less important effects on the total farm investment. In 1930, the value of land and buildings made up 84 percent of the value of farm property. Machinery represented only 5.8 percent of the total valuation. Tractors, trucks, and auto mobiles reduce the number of horses and displace horse equipment; therefore, they do not increase farm investment in proportion to their total cost.

The evidence points to increased capital needs for agriculture, but an

increase probably not much greater than 25 percent of the working capital and 5 percent of the total investment. Whatever increase is made in the size of commercial farms will increase the required investment per commercial farm and will increase the difficulty that a farm laborer has in acquiring sufficient capital to begin tenant operations. On the other hand, an increase in the number of subsistence farms with smaller capital requirements would tend to prevent a large increase in the average investment per farm for the country as a whole.

The most significant change in farm costs will be an increase in the proportion which cash costs are of total farm costs. That the need for gasoline, oil, grease, and repairs for tractors will necessitate larger cash outlays than if horses were used and were fed home-grown feeds has already been mentioned.

QUITE transitory advantages from new techniques often become capitalized into land values. Adoption of the standard tractor and the prairie-type combine probably gave a temporary bulge to land values in some Great Plains areas in the 1920's. Mechanization probably has tended to enhance the level of land prices in the areas best adapted to it and to depress values in the areas not well suited to it, because of the competition which it has initiated among farmers to obtain the more level farms with large fields.

Since mechanization encourages an increase in the number of acres operated by individual farmers and is likely to cause some displacement of farmers, the competition for the better land may become keener. With farmers willing to pay more for the good farms, or willing to pay higher rentals for leasing them—in some instances even to the extent of sacrificing their level of living—it appears likely that mechanization may still exert a pressure toward higher land values in the

better farming regions, at least as a first stage in adjustment.

THE development of mechanical equipment especially for small farms and the probable greater demand for farms in the poorer agricultural areas (on the part of those farmers who cannot gain a foothold in the better regions, or who cannot find employment outside of agriculture) will probably work to maintain land values even in the poorer agricultural regions. (It is necessary to emphasize that such a tendency is dependent upon attempts of the displaced group to remain in agriculture because of the lack of better opportunities. Perhaps this can be characterized as the second stage in adjustment to the new situation.)

At a later stage, if net incomes from farming are considerably lowered by reduced prices, there will naturally be a tendency toward lower land values. Such a tendency is likely to appear even though other alternatives do not open

up for the displaced population, because a living for the farm family represents the first claim on farm income. How much land values will be affected depends in part on how tenaciously farmers will cling to their accustomed levels of living.

IN summary, one can say that technological changes will exert an upward pressure on land values in the stage when farmers' net incomes are increased. If this stage is accompanied by increased production which eventually results in lower prices, the upward effect may be only temporary and may cause greater distress in the low-priced period because of indebtedness incurred at a high level of land values. If no alternatives are open to the population that tends to be displaced through mechanization, the level of land values may be maintained for a time even under lower prices, but only at the expense of the levels of living of many farm families.

Effects on Regional Specialization

NOT all areas can adopt new techniques with equal facility. For example, certain types of mechanization can be used more easily on level land than on hilly land. Sometimes there are economic and social resistances to change. The impact of the different developments, therefore, is likely to vary, region by region, according to physical, economic, and social conditions within each region, and with the extent of change in competing regions.

Among the forces that are likely to have the most important effects on regional specialization are increased mechanization, the adoption of crop acreage adjustment and conservation programs, the use of hybrid seed corn, other plant improvements, and new ways to preserve foods.

INCREASED use of tractor power and complementary equipment intensifies the advantage in cotton production of level and more fertile areas that also have less serious conservation problems. Relatively greater specialization in cotton production than in the Cotton Belt generally is perhaps to be expected in the Mississippi Delta, the Black Prairie of Texas, western Texas, and Oklahoma.

A problem is the probable effect of the conservation programs on dairy production in the Midwest, and on the supplies of grain feeds that farmers in the North Atlantic States must buy. Preliminary studies indicate that these programs by themselves will not greatly increase dairy production in the Midwest. In fact, dairying in the Corn Belt increases more rapidly in

depression periods—when corn, hogs, and beef cattle are selling at distress prices. Potentially, the Corn Belt is a formidable competitor in dairy production, but this competition will not become a reality so long as corn, hogs, and beef cattle are more profitable enterprises.

DEVELOPMENTS in the preservation by freezing of fruits and vegetables will probably intensify competition for the vegetable growers in the North Atlantic States who are depending for their advantage on nearness to large population centers. But there are probably certain areas with natural production advantages that will benefit.

The poultry industry in this region had developed close to the urban markets along the Atlantic Seaboard and has benefited from a period of relatively low grain prices. It has been influenced tremendously by a remarkable development in scientific knowledge of breeding, feeding, and control of disease. One cannot be certain, however, that the resulting regional advantage is permanent. To retain it means that leadership in new technical and economic developments must be held in this region.

These States have some areas well suited for fruit and vegetable production; these areas may benefit from developments in frozen packing. Cut-over areas may benefit from the development of markets for forest products. Such a development would make it possible to combine farming and forestry.

THE Corn Belt States naturally have been affected most by the use of hybrid seed corn. Further effects of this development in the next few years will have the most direct impact on these States, and to the extent that expanded production is not offset by acreage control, these States will produce an increased proportion of the total corn crop. The

combined effect of hybrid corn and the release of land formerly used for horse feed will mean a significant increase in the feed supply for meat animals unless offsetting measures are taken.

The crop-adjustment and conservation programs probably will tend to shift livestock production towards roughage-consuming animals such as grass-fed cattle and sheep.

IN the Great Plains the drought cycle has been so severe that many persons have asked whether any type or size of farm can be developed that will permit a farm family to survive prolonged drought periods on a self-supporting basis. Recent Government activity in the Plains has been directed toward answering this question. Survival will be aided by the further development of programs designed to conserve both human and natural resources by shifting some of the higher-risk dry-farming areas to less intensive grazing uses. Programs that encourage improved methods of reseeding will hasten the adjustment.

Even in some of the better areas a way will have to be developed for maintaining the organic matter in the soil in order to prevent soil blowing. In the Northern Plains, perhaps, this can best be achieved by seeding perennial grasses on a considerable part of the present crop acreage, leaving the land in grass over a period of years, and plowing it for crops only as rapidly as an equivalent acreage is seeded back to grass. A combination wheat-and-grass farm will require the addition of livestock to utilize the grass, and, therefore, raises the problem of feed supplies in dry years.

Eventually the indicated developments in the Great Plains probably will mean less wheat and more roughage-consuming livestock, largely beef cattle and sheep. Combined livestock and grain farming will be more prevalent. The mechanization of wheat

production is largely an accomplished fact, and adding livestock to the wheat farm would probably not mean less mechanization, but would accelerate the trend to larger farms.

If the more strictly ranching areas are to maintain their most important resource—grass—they must institute an effective conservation program.

THE most important effects of technological developments on the West Coast are likely to be felt in the commercial fruit and vegetable areas. Washington and Oregon produced about one-fourth of the total United States pack of frozen vegetables in 1938. This represents a tenfold increase in 5 years, and further rapid expansion appears probable.

The rapid development of frozen packing will mean that the areas of the

South and Southwest (including California) that now produce small fruits and vegetables for northern and eastern markets during the winter and early spring will lose an important part of their market outlet, unless they can remain in production at prices comparable to those prevailing when the products from the more temperate areas come on the market. The higher acre yields and smaller production expenses give the temperate areas an advantage that will increase the adverse effect of frozen packing on those areas now producing "out-of-season" fruits and vegetables.

On the Pacific coast, frozen packing is likely to favor the northern part of the region where it may furnish an alternative enterprise to distressed orchard areas.

Some Suggested Lines of Action

INSTEAD of preventing or slowing technical progress, we need to speed up and give new direction to social and institutional changes in order to keep pace with technological change. We need to spread the benefits of technology more widely. We need to encourage the development of new opportunities and greater security for all farm people, particularly the disadvantaged groups.

Inventions and technological progress have been a major factor in raising the standard of living of all the people. But it also has been recognized that these benefits have not always been distributed equally among all groups—that along with them have come certain maladjustments.

As long as our economy was expanding and domestic and foreign markets were growing steadily, these maladjustments were temporary. As the era of free land passed, however, as we have shifted from a debtor to a creditor nation, and as our ability to find or to

hold foreign outlets for our excess products has declined, maladjustments due to scientific progress have become accentuated.

THE measures proposed relate primarily to steps that might be taken within agriculture itself. It is not assumed that these are the only steps that need to be taken nor that they will in themselves relieve the existing maladjustments. In fact, even more urgent adjustments are needed in the nonagricultural segment of our economy. If such adjustments were made in the direction of greater freedom of enterprise, expanded output, lower and more flexible prices, there would be much less disparity of exchange between agricultural and industrial production and prices and there would be increased opportunity for the excess workers in agriculture to find gainful employment in industry.

First, we need to develop a program which will provide for the immediate

relief and rehabilitation of those now unemployed and in distress and which will absorb and cushion the shock for the additional numbers expected to be displaced. This calls for a conservation works program. Second, looking beyond the immediate situation, we need to develop measures for the permanent rehabilitation of these people. In a rural conservation works program, the present unemployed and underemployed in agriculture would be put to the productive task of building up our greatly depleted soil, forest, and water resources.

We need to find secure incomes for more than 3 million men now living on farms, probably half of whom are wholly or partly unemployed while the other half and their dependents barely exist on gross cash incomes averaging not more than \$200 to \$300 annually. With each passing year many more men and boys of working age are likely to be looking for opportunities on the land. It has been estimated that these people represent an unused annual labor supply of 450 million man-days.

THE very areas where most of these needy farm people live are the same areas where our natural resources have been punished the most severely. To rebuild these resources to a safe level and to protect them will require many millions of man-days of labor. As far as we can see right now, to do the things we know should be done, is a task that requires at least 1½ billion man-days of labor.

A rural conservation works program that would marshal the unused and wasted rural manpower now available to perform this needed task of conservation on our farms, ranges, and forests would go a long way toward giving the temporary security and supplementary income so badly needed by these people and, at the same time, would be building up a physical base underneath them and the whole population of great permanent value. The program, as envisaged, would in-

clude both work projects and credit activities. As far as possible these projects should be fitted into existing administrative machinery so that there would be continuity in conservation efforts and duplication avoided.

OTHER measures are needed to provide permanent security and rehabilitation for these people. One is a proposal that the present Farm Security Administration program of supervised loans, debt adjustment, and the like be extended to reach a greater number of the low-income group. Such an extension would require an increase of supervisory personnel and funds for work grants to be tied to a farm plan and used in conjunction with rural rehabilitation loans.

If the lowest income group is to be rehabilitated, either some means of supplementing its farm income from part-time work off the farm will have to be found, or a part of the group will have to be relocated in areas of greater opportunity. If enough families left these areas, the size of farms of the remaining families could be increased so that with the aid of the Farm Security Administration most of the remaining families could become self-supporting. If those families who would leave were to remain in agriculture, it would be necessary for them to have access to good land, either new lands which may become available through drainage or irrigation, or flood-control measures, or by subdividing the large holdings of good land which is now thinly populated. Development of local industries which would furnish part-time employment opportunities for the families in this group would obviate the necessity for part of them to relocate. About the only alternatives to relocation or part-time employment off the farm would be either a permanent public works program or permanent relief.

THREE remedies are suggested to meet the problems of displaced farm labor: A farm-placement service both for short-time labor and for permanent settlement, either as farm operators or as farm workers; a housing program, including camps for migratory workers, labor homes in areas in which it is desirable to maintain, within the area, the peak-season labor supply throughout the year; a rural counterpart of wages and hours unemployment and old-age devices needed for farm labor.

Another major proposal looking toward the rehabilitation and permanent security of these displaced and underprivileged people is to encourage and maintain the family-sized farm. Various measures might be adopted. One is to expand the present tenant-purchase program so that the Government can make loans on a much larger scale than at present to qualified tenants, sharecroppers, and farm laborers to enable them to acquire family-sized farms and to make the necessary improvements on them. A second suggestion is to provide that all reclamation and other new farm land developments be settled on a family-sized and owner-operated basis and that the perpetuation of this tenure system be guaranteed.

ANOTHER suggestion is to settle or resettle shifting and nonowner farm families on good lands now owned and operated in larger than family-sized units. A fourth is to extend cooperative loans, and technical guidance when needed, to groups of operators of family-sized farms, both owners and tenants, for the purchase of purebred sires, mechanical equipment, and like things as a means of bringing the latest, proved benefits of technology to relatively small farms.

A companion measure is to extend Federal aid, both financial and advisory to farm-forest cooperative associations, which hold considerable promise for betterment in the marketing and

management aspects of farm forestry.

Of two methods for fitting machines and equipment to farms, one involves designing machines to fit the needs of the farms, and the other involves "designing" the farms to fit the capacities of the machines and equipment. The objective of both is to lighten the overhead costs of owning and operating equipment. Small farms would benefit even from the cooperative ownership of ordinary farm machinery such as combines, manure spreaders, drills, and the like. A fifth suggestion is further to scale Agricultural Adjustment Administration allotments and payments in favor of the small producer. A sixth suggestion is to equalize credit opportunities by making credit available to small holders at reasonable rates of interest.

THE well-being of disadvantaged farm people might be greatly improved if they were able to use their otherwise idle time in the production of things that they want and need. More farm people might have electricity, for example, if they were to pool their labor and abilities for the purpose of constructing electric lines in their communities. Rural industries and handicrafts also can help disadvantaged farmers by providing additional employment opportunities.

A great deal more attention needs to be directed toward part-time farming, or the organization of small farm holdings around factories and small industrial centers in such manner as to allow people to live in the country and divide their working time between agricultural and industrial employment.

Successful noncommercial farming requires that some cash income be obtainable for the purchase of articles that cannot be produced in agriculture, and the land must be fertile enough to avoid large cash expenditures for fertilizer. If the land requires fertilization, some sort of financial assistance will have to be provided.

Much of the noncommercial farming is now confined to the poorer land, but a positive approach to the extension of this type of farming is the establishment of such farms in areas of commercial agriculture, where land is more productive, and part-time farm employment for cash will be more plentiful.

COOPERATIVE farming, too, can bring benefits to farm families. It involves more than the cooperative ownership of machines. It includes also operation of the land and cooperative sharing in the returns. A competent manager of cooperative farms can effect more efficient operation than is possible on many individual units. Land and buildings may or may not be jointly owned. If not, a satisfactory arrangement is to keep title to the land and buildings in the hands of a public agency so that the plant can be maintained on a continuous basis.

A lack of adequate training and education handicaps disadvantaged farm people. A training system of instruction and direction in methods of earning a living is a remedy. A farm laborer who is taught the more general farm operations and how to operate specialized machines and equipment can more easily get work on highly mechanized farms and in farm forestry. New tractors, electric appliances, and other mechanical devices on farms have created a need in rural areas for individuals skilled in servicing the various machines.

MEASURES needed to stabilize agricultural economic conditions may be divided into (1) measures designed to increase consumption and demand, and (2) measures designed to stabilize returns to commercial producers, including such devices as acreage adjustment, commodity loans, crop insurance, marketing quotas, and marketing agreements.

The most obvious way to increase the total demand for agricultural prod-

ucts would be through a general raising of national income so that all classes would have increased sums to spend. There appear to be two general ways to expand domestic consumption and demand for farm products—by increasing the consumption of food and clothing by low-income groups, and by discovering new industrial uses for farm products.

One way in which to add to the purchases of farm products is to extend the food stamp plan and the surplus commodities purchase program. The results obtained from these measures are promising and it would seem especially desirable to consider the rather rapid extension of the food stamp plan, provided the present situation with respect to unemployment and underemployment continues to persist.

Another approach to the problem is by lowering costs of distribution, either through market reorganization or through the adoption of special techniques for increasing sales and decreasing the cost of marketing and distribution.

Educational emphasis upon the need for better diets is another means of increasing consumption. The expansion of industrial uses for agricultural products calls for chemical and technological research in order to find new uses for farm products, the development of efficient processing and manufacturing methods, and the introduction of the new products on the commercial markets.

UNTIL such time as the effective demand for agricultural products can be substantially expanded, it seems desirable to continue or strengthen current activities designed to maintain agricultural prices and income at a reasonable level. One of the most effective devices in this field is, of course, the ever-normal granary program. One of the essential features of the plan is that loans will be made to farmers in years when yields are good and stocks and production are high, at

something above the price that otherwise would prevail, and that these loans and the accompanying surplus stocks will be liquidated in years when yields are below average or demand is high. The device undoubtedly is effective for stabilizing agricultural prices and supplies and one that works in the interest of both the general public and the farmers themselves. But care must be taken to see that the loan rate is not so high that serious losses will follow, and that the loan program is geared in with the acreage adjustment and marketing quota approaches in such a way as not unduly to stimulate acreage and production.

ATTENTION should be given to the need for better rural facilities. Owing to the fact that our agriculture has been exploited, and that our pioneering psychology has led a large number of people to look for a return in the form of increased land values rather than in the form of a stable and satisfying rural life, the rural facilities, such as roads, schools, and to a marked extent rural housing, have not been developed adequately even in the better farming sections of the United States.

We must develop a permanent agriculture to allow for a needed investment in roads, houses, and other rural service and living facilities. Farm prices and farm income must be maintained at such a level as to allow the needed investment. If we are to de-

velop a rural life in which the technical and other elements are integrated in the most desirable manner, we must work toward developing a rural life that is generally recognized as a desirable way of living. Rural youth must be interested not only in the material comforts of life, but they must also be trained in such a manner as to derive considerable satisfaction from the fact that they themselves are an important part of one of the classes whose work is most fundamental to our American civilization—our agricultural group.

IN our consideration of problems and remedies, we should not assume that industrial expansion—the best way to absorb those who have no particular desire to remain in agriculture—has ceased for all time. Something like a huge defense program may be a key to industrial expansion; if so, certain of the suggested remedies no longer will be needed badly. But of several details we should be mindful: Industrial expansion through armament expansion may be temporary and lead only to a recurrence of the problems we have been encountering; we should seek permanent stability for American farming; over a long period, it should be possible for the United States to adjust its economy in a way that will permit expansion of production in industry and agriculture. That would make possible a higher level of living for the entire population. That is our goal.

Adjustment.—More than 6 million farmers, operating 82 percent of the cropland of the United States, are participating in the AAA Farm Program this year. Last year, about 80 percent of the nation's cropland was under the program. In the Southern Region 2,590,000 farmers are participating in the program this year; in the East Central, 1,019,000 farmers; Western, 617,000; North Central, 1,568,000; Northeast, 226,000.

EXPORTS: Curtailed

After a year of war in Europe it is becoming increasingly evident that export demand for our farm products is considerably smaller than it otherwise would have been. The value of domestic agricultural exports in July 1940 was only about 1 percent above that of July 1939. Under peacetime conditions, with industrial activity at a considerably higher level than a year earlier, and with abundant supplies of farm products, exports in July probably would have been considerably in excess of those a year earlier.

Perhaps a clearer picture of the adverse effects of the war on exports is presented by changes in the export volume of some individual farm products which are not subject to export subsidy payments. Pork products exported in July 1940 totaled 3.2

million pounds as compared with 16.9 million pounds a year earlier. The decline in exports of fresh deciduous fruits was also pronounced. Despite much smaller exports of leaf tobacco in previous months than a year earlier, tobacco exports in July 1940 were just about the same as in July 1939. Lard exports were higher in July 1940 than they were a year earlier. Exports of both tobacco and lard are affected by the controls being exercised by the British Government.

Even with the continental European import market closed, exports of United States industrial products in July were 43 percent higher than in July 1939. The stimulating effect of this on domestic industrial activity and on the consumer demand for farm products continues to offset, at least in part, the adverse influence on farm prices and income, of the unfavorable farm product export situation.

—P. H. B.

UNITED STATES: Exports and Imports of Specified Agricultural Commodities, July 1939 and 1940, and September–July 1938–39 and 1939–40 ¹

Commodities	Unit	July		September–July	
		1939	1940	1938–39	1939–40
Exports:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Pork:					
Cured pork ²	Lb.	9,904	1,168	69,902	44,562
Other pork ³	Lb.	6,980	2,065	42,093	71,961
Total pork.....	Lb.	16,884	3,233	111,995	116,523
Lard, including neutral.....	Lb.	25,339	28,239	241,085	236,856
Wheat, including flour.....	Lb.	7,270	3,686	98,620	41,755
Apples, fresh ⁴	Bu.	108	53	11,749	2,875
Pears, fresh.....	Lb.	8,944	2,896	140,477	67,443
Tobacco, leaf.....	Lb.	13,908	13,948	415,016	288,782
Cotton, excluding lint (500 lb.).....	Bale....	113	143	3,300	6,300
Imports:					
Cattle.....	No.	56	43	696	588
Beef, canned, including corned.....	Lb.	8,082	4,070	75,618	71,415
Hides and skins ⁵	Lb.	22,599	28,310	272,173	298,609
Barley malt.....	Lb.	10,136	3,588	97,589	56,336
Sugar, cane (2,000 lb.).....	Ton....	354	293	2,294	2,907
Flaxseed.....	Bu.	1,123	661	17,652	12,238
Tobacco, leaf.....	Lb.	5,171	6,140	54,482	58,147
Wool, excluding free in bond for use in carpets, etc.	Lb.	5,844	10,232	64,430	161,310

¹ Corrected to August 20, 1940.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled, or salted, and canned pork.

⁴ Includes baskets, boxes, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records of the Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of Industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	Whole-sale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in— ⁶				
					Living	Pro-duction	Living and pro-duction		
1925	91	98	101	151	164	147	187	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	153	147	153	180	281
1930	91	88	96	126	148	140	145	167	277
1931	75	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	76	96	109	108	109	85	187
1934	75	61	78	109	122	125	123	95	178
1935	87	69	80	117	124	126	125	103	180
1936	103	80	81	118	122	126	124	111	182
1937	113	94	84	126	128	135	130	126	187
1938	88	73	82	115	122	124	122	124	186
1939	108	83	82	113	120	122	121	124	-----
1939—August	104	83	81	109	-----	-----	119	-----	-----
September	113	86	82	115	122	123	122	-----	-----
October	121	91	82	116	-----	-----	122	126	-----
November	124	93	82	116	-----	-----	122	-----	-----
December	126	93	82	116	121	123	122	-----	-----
1940—January	122	88	82	116	-----	-----	122	119	-----
February	116	89	82	115	-----	-----	122	-----	-----
March	112	87	82	114	121	125	123	-----	-----
April	111	86	82	115	-----	-----	123	124	-----
May	114	87	82	114	-----	-----	123	-----	-----
June	121	89	83	113	121	125	122	-----	-----
July	121	91	83	113	-----	-----	122	129	-----
August ⁷	-----	-----	-----	113	-----	-----	122	-----	-----

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio of prices re-ceived to prices paid	
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat ani-mals	Dairy prod-ucts	Chick-ens and eggs		
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	153	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	82
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1939—August	64	71	70	99	101	100	90	88	74
September	83	76	73	117	117	107	102	98	80
October	77	74	73	126	112	112	108	97	80
November	79	75	66	123	107	117	117	97	80
December	87	82	65	96	101	118	97	96	79
1940—January	90	85	66	117	103	119	91	99	81
February	91	85	76	108	101	118	96	101	83
March	92	85	73	128	102	114	83	97	79
April	96	85	81	145	104	110	82	98	80
May	92	83	88	133	108	106	84	98	80
June	83	81	104	134	102	104	81	95	77
July	78	80	89	98	110	105	88	95	78
August	76	88	79	112	110	109	90	96	77

¹ Federal Reserve Board, adjusted for seasonal variation. Revised August 1940. ² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1928=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-1,3 payable mostly within the period Aug. 1, 1909-July 31, 1914. ⁷ Preliminary.

NOTE: The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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NINETEEN FORTY-ONE OUTLOOK is for improved domestic demand for farm products, smaller exports, higher general average of prices, larger total cash income from marketings. Farm income—including Government payments—the total exceeding 9 billion dollars—may be the largest since 1929. But increased costs of commodities and services used in farm production will cancel part of the gain in farm income—1941 over 1940. * * * Agricultural production of all commodities combined may be a little smaller in 1941, but with large carry-over stocks of several commodities the total supply will be fully adequate for the country's needs. Farmers in best position as to prices and income are those producing for domestic market—producers of dairy and poultry products, meats, some fruits, and vegetables. Principal support to prices and income from cotton, wheat, tobacco will be Government loan and export programs. * * * For national defense the physical condition of the agricultural plant is the best in many years. Soil productivity has been increased, man-power is more than enough for any emergency. Agriculture is ready.

Domestic Demand in 1941

GREATER consumer purchasing power in the United States in 1941 compared with 1940 is expected to result in improved demand for farm products. Consumer incomes will reflect not only a substantial gain in industrial production, but also the gradual cumulative effects of the general improvement in business conditions during the past 2 years.

The rapidly expanding program for national defense is chiefly to be credited with the anticipated increase in industrial production, employment and consumer incomes. More than 7 billion dollars probably will be spent for national defense purposes in 1941. Of this about 5 billion represents an increase over 1940. Partly offsetting the effects on business activity of these increased defense expenditures will be decreases in some other branches of Government spending and increased tax collections. It is estimated that about half of the increase in defense spending in 1941 will represent an increase in the net contribution of the Federal Government to national purchasing power.

The development of the defense program is having a stimulating effect upon general business sentiment. Businessmen generally are anticipating several years of favorable business conditions and possibly of rising prices. This makes them less apprehensive about inventory positions, more inclined to take risks in developing new or expanding old enterprises. A part of the stimulating effects of the defense program, however, will be merely an offset to unfavorable developments which otherwise would have occurred in some lines of production and to this extent will not mean a net increase in industrial activity over that in 1940.

EXPORTS of industrial products increased about 36 percent in value following the outbreak of European war. As a percentage of industrial production in the United States, exports increased from 7.3 in September to 9.2 percent in December 1939. Following the German invasions last May a number of important export outlets for United States industrial products were closed. But the effects of this on our industrial exports were offset by increased purchases by Great Britain. The total value of industrial exports, consequently, remained almost unchanged. Exports to Great Britain now represent more than twice the proportion of our total industrial exports before the outbreak of war, despite an increase in exports to South America and other neutral nations cut off from their usual European sources of supply. It is estimated, however, that the loss of this trade with Great Britain would not directly reduce industrial production in the United States more than about 4 percent. The indirect effects might be greater, should businessmen cancel orders or delay new purchases and plant expansion.

INDUSTRIES expected to contribute importantly to the increase in industrial production in 1941 include steel, machinery, nonresidential building construction, and miscellaneous industries producing armaments. Steel output probably will be the largest ever attained in this country, since the needs of all major steel consumers—with the possible exception of automobile manufacturers—are expected to increase. By the end of 1940, machinery output is expected to approximate the all-time high reached in 1929, and in 1941 production prob-

ably will tax the facilities of the industry. Defense requirements will necessitate a considerable increase in nonresidential construction, and unless building costs rise too rapidly a relatively high level of consumer purchasing power should contribute to the maintenance of residential building around recent high levels. Many small industries, or parts of large industries, will be engaged in the manufacture of military equipment of various kinds. Individually, some of these industries do not carry much weight—airplane manufacturing, for example, despite its great importance for defense, represents a very small part of total manufacturing activity—but in the aggregate they will help materially to expand the total volume of output.

Increases in industrial production will be limited by the fact that several of the industries whose products will be in greatest demand already are approaching or have reached practical capacity, which cannot be expanded greatly in 1 year. (It is estimated that if the separate lines of production [subgroups] included in the Federal Reserve index of industrial production operated simultaneously at peak rates reached in any month in the past [after seasonal correction], the total output would be about 20 points above the August 1940 level. Such a confluence is hardly to be expected for any 1 month, much less for 12 consecutive months.)

USUALLY there is some lag between changes in industrial production, general employment and consumer purchasing power. Because plant efficiency varies directly with output, changes in manufacturing employment are not proportional to changes in production. Increased industrial activity and factory employment later result in additional changes in miscellaneous types of employment such as service and distribution. Dividends and interest payments to

owners of capital used in industry also lag behind changes in the volume of operations. Since business conditions have been mainly on the upgrade since the middle of 1938, consumer incomes should be even better in 1941 relative to 1940 than the prospective increase in industrial activity might indicate.

The number of people unemployed, estimated by the National Industrial Conference Board at 8 million to 9 million during the first 7 months of 1940, will be substantially reduced in 1941 as a result of increased industrial activity and the increase in the armed forces of this country. Should past relationships between industrial activity and nonagricultural employment continue, around 3 million additional persons may be either employed or in the military service in 1941 compared with the average for 1940.

IN the case of most foods, the total quantity consumed in the United States each year is approximately the amount produced. An increase in demand such as is in prospect for 1941, therefore, will not in itself result in any material increase in food consumption. Rather, the tendency is for such an increase in demand to raise the prices of agricultural commodities consumed in the domestic markets. For some farm products, however, decreases in foreign demand or increases in production may offset the effects on prices of the improvement in domestic demand. For some commodities, also, considerable increases in demand would be necessary to raise prices beyond the point at which support is being given by Government commodity loans.

Farmers have expressed interest as to whether the enlargement of military forces means a considerable increase in the quantity of food consumed per person. Per capita consumption of food in the army is said to be about 40 percent greater than in civilian life, but the relatively small number of persons in military service makes this of little importance in total food consumption.

Export Demand to Decline

EXPORT demand for United States farm products is likely to be worse in 1941 than it was in 1940. Continental European markets are virtually closed. They will be closed so long as present hostilities continue. Exports of soybeans, feedstuffs, and other products to Denmark, the Netherlands, or other continental countries will be greatly reduced. * * * Cotton exports to Great Britain and other countries are expected to be much smaller in 1941 than in 1940. * * * World supplies of wheat are large, Great Britain can obtain all needed supplies from the dominions. * * * War restrictions on imports of fruits and miscellaneous products by the United Kingdom will be continued, and may be more stringent in 1941 than in 1940.

There is a possibility that German bombing of British warehouses and other food handling and manufacturing facilities will reduce seriously the supplies of some foods and other commodities in Great Britain. In this event, Great Britain may be compelled to turn to the United States for larger quantities of products not obtainable from Empire sources—products such as lard, tobacco, cotton,

and canned foods. It is not likely, however, that bombings could be so effective as to bring about an increase in our exports to Great Britain sufficient to offset the loss of exports to other countries.

Should the war in Europe be terminated in 1941, the United States export situation may become more favorable than now appears probable. Deficits of agricultural products in many European areas may cause the affected countries to turn to the Western Hemisphere for supplies. These countries, however, would have little purchasing power, and harter arrangements might be sought as a means of obtaining supplies. South American and other surplus-producing countries whose regular markets have been sharply curtailed no doubt would bid eagerly for this business, and any considerable share obtained by the United States might be at the expense of additional export subsidies.

Even though the termination of war did not mean the defeat of Great Britain, the cost of rehabilitation would be so great as to make probable a continuation of present British restrictions on imports of many commodities, and of efforts to obtain needed supplies from Empire sources.

Farm Prices and Income

LARGER cash income from marketings of farm products and increased costs of farm production are in prospect for 1941. Basis for this outlook is a prospective increase in prices of farm products and an increase in the general level of prices of commodities and services used in farm production. The higher prices of farm products will be induced by improvement in consumer buying power and a rise in

the general level of wholesale prices of all commodities. Higher prices of commodities and services used in farm production are expected to result from the increased demand for materials and men in the production of industrial goods for national defense.

The exact extent of the prospective rise in prices of farm products and in the costs of production cannot be predicted. It is probable, however, that

part of the increase in income from farm marketings may be offset by the higher costs of production. Another consideration is that not all farm products will share in the higher prices. The market for several major export crops will probably be restricted by reduced foreign demand, and prices of these crops will be supported largely by Government loan and export programs. Income from livestock and livestock products is expected to increase more than the income from crops.

THE rise in prices of farm products is likely to be most pronounced for commodities which are normally consumed almost entirely in the United States. This applies especially to some fruits and vegetables, and most livestock and livestock products. Prices of most commodities largely dependent on world markets, or which are being supported by Government loan programs, probably will not be very different in 1941 than in 1940. Both the production and prices of dairy products are expected to average slightly higher in 1941, a prospective decline in hog production will be offset in part by increased sales of other meat animals, and the favorable influence of rising consumer incomes upon the prices of meat animals is expected to continue through 1941.

The trend of farm income will be

similar to that of farm prices, since farm production is expected to be about the same as, or only slightly smaller than, in 1940. Increased incomes from poultry products are indicated by prospects for more nearly normal supplies in 1941 and for improved consumer incomes. Improvement in the income from crops appears most likely in the returns from vegetables and from fruits consumed largely in domestic markets. Income from grains, cotton, and tobacco is likely to be maintained by loan programs despite relatively large carry-overs and small export outlets.

AS for costs of production, fewer workers will be available for farm employment than in 1940 because of the higher level of industrial activity and the increase in the armed forces of the country, and farm wages will probably be somewhat higher than in 1940. Prices of farm machinery, automobiles, and building materials also may average slightly higher in 1941 because of the large requirements for steel and lumber products in the defense program. Wholesale prices of fertilizer materials were about 3 percent higher in July this year than last, but prices of mixed fertilizers were unchanged. The moderate advance in prices of fertilizer materials may be reflected in higher retail prices for fertilizer used in 1941 production.

Wholesale Prices To Rise

THE general level of wholesale prices in the United States is expected to average moderately higher in 1941 than in 1940. The forces affecting prices will be conflicting to an unusual extent, the defense program and improvement in general business activity favoring higher prices, but the foreign situation in general constituting a depressing influence. The result is likely to be a smaller change from

present levels than might be indicated by the changes now going on in world economic conditions. The general level of prices has been unusually stable in 1940, and the fluctuations during the past 3 years have been much smaller than in any similar period since the late 1920's.

The national defense program will affect the general movement of commodity prices in two important ways:

First, the higher level of business activity and consumer purchasing power the defense program is expected to bring about will be a favorable influence on prices of consumers' goods, and particularly of farm products consumed almost entirely in the domestic market—meats, dairy and poultry products, and some fruits and vegetables. Generally, increases in consumer incomes and demand for nonagricultural products bought by consumers are reflected more in increased output than in higher prices, as contrasted with the situation in agriculture where production is relatively constant and adjustments to changes in demand are reflected to a much greater extent in prices. But there will probably be some increase in prices of manufactured consumers' goods, particularly if costs of materials and labor go up.

THE second way in which the defense program will affect prices is by greatly increasing the demand for certain raw materials and semi-finished products, and for skilled and semiskilled labor. Sharp advances in prices of these products, and of wage rates, might lead to an ascending spiral of increased costs, higher prices, higher costs of living, demands for further increases in wages, and so on. Once well under way, such a movement might carry along with it other prices not directly affected by developments leading to the inflationary spiral. Cotton prices rose during the World War despite restricted foreign outlets. It is believed, however, that increased demand will result in only moderate increases in prices of some commodities. Many of these, such as copper and petroleum, enter into international trade, and world conditions now are not conducive of marked price increases for these products. Moreover, the Federal Government has adopted a policy of trying to prevent sharp increases in prices of non-agricultural commodities, especially those affected by the defense program. Recent experience of Great

Britain indicates that government controls may not be fully successful in accomplishing this objective, but controls could do much to minimize changes in prices of some key products such as steel.

THE European war is proving to be a depressing rather than a stimulating factor influencing movements of the general price level in the United States. In contrast to the situation prevailing during the World War there seems little likelihood of a general shortage of agricultural products, either in this country or in other parts of the world except the blockaded countries of Europe. The loss of important European markets has greatly curtailed export outlets for a number of important nonagricultural as well as farm products. Competition among surplus-producing nations for the remaining markets is keen. Should the European war be terminated before the end of 1941 some of these markets may be opened again, but the lack of purchasing power by countries involved in the war, and the uncertainty regarding trade methods to be followed by the nations of Europe, do not point to any marked increase in prices of internationally traded products in terms of United States dollars.

Another influence tending to limit general price advances in 1941 is that prices of several important agricultural commodities have been supported considerably above competitive supply and demand levels by the agricultural programs. A considerable increase in demand would be necessary to lift prices much above these support levels. Thus, the situation for farm products entering export markets, which constitute an important segment of the general price level, is not favorable to any wartime price inflation.

THE net result of these conflicting forces is likely to be a moderate increase in prices of some agricultural commodities directly influenced by

changes in domestic consumer purchasing power, modest increases in the prices of some nonagricultural consumers' goods such as automobiles, and perhaps sharp increases in a few

industrial products such as lumber, which already has felt the effects of the defense program. This probably means a moderate increase in the general level of wholesale prices.

1941 Outlook For Livestock

ALTHOUGH slaughter supplies of livestock in 1941 will be larger than the average of recent years, they will be smaller than in 1940. A material reduction in hog marketings and a small decrease in supplies of grain-fed cattle are in prospect. The decrease in supplies will be accompanied by a stronger consumer demand for meats, and the general level of livestock prices is expected to average higher in 1941 than in the present year; the rise will be more pronounced for hogs than for other species of livestock.

Cash income from marketings of meat animals in 1941 probably will be greater than in 1940. Total marketings of cattle and calves and of sheep and lambs are not likely to be greatly different from those of this year, while prices of both cattle and lambs may average a little higher. The decrease in hog marketings in 1941 from 1940 will be less percentage-wise than the advance in hog prices.

The smaller supplies of hogs next year will mean that total meat production in 1941 will be moderately smaller than in 1940, but it will be larger than in 1939 and above average for recent years. Total meat production in 1940 is the largest on record, and per capita production is the largest in more than 10 years.

Livestock numbers on January 1, 1941, on an animal unit basis, will be around 3 or 4 percent less than a year earlier; a decrease in hogs will more than offset an increase in cattle. Cattle numbers probably will increase further in the next few years, while hog numbers may fluctuate around the level of the past 2 years. Under these

conditions the trend in total meat production is expected to be moderately upward after 1941. The record production of meats in 1940 may well be exceeded within the next 3 or 4 years. In considering the effects of the probable changes in supplies upon livestock prices, however, it should be recognized that fluctuations in demand (industrial activity and national income) over a period of years have been much greater than fluctuations in supplies.

HOGS: Largely as a result of the unfavorable ratio of hog prices to corn prices since early last fall, the 1940 spring pig crop was curtailed by about 8 percent. The total number of pigs saved during the past spring amounted to 48.0 million head, 4.3 million head less than the 1939 spring crop and 3.6 million head less than the predrought (1929-33) average spring pig crop. Decreases from a year earlier were reported in all regions, but the largest percentage reductions took place in the South Atlantic and South Central States. The only region where hog production is still below the predrought level is the western Corn Belt.

On the basis of breeding intentions reported by farmers about June 1 and other indications, the number of sows to farrow in the 1940 fall season (June-November) is estimated to be about 12 percent smaller than the number farrowing in the fall of 1939. This reduction in sows will be reflected in a similar reduction in the 1940 fall pig crop. Present indications are that the fall crop will be about 27.8 million head compared with 32.0 million head in the

fall of 1939. Together, the 1940 spring and fall pig crops are expected to total about 75.8 million head. This is a reduction of 8.5 million head, or about 10 percent, under the 1939 combined spring and fall pig crop.

Slaughter supplies of hogs in the 1940-41 hog-marketing year, which began October 1, will be materially smaller than the large supply marketed during the current 1939-40 season. On the basis of past relationships between changes in the size of the pig crop and hog slaughter, the number of hogs slaughtered under Federal inspection in the 1940-41 hog-marketing year is expected to total about 43 million head. This will be a decrease of around 10 percent from the approximately 47.5 million head slaughtered in the 1939-40 season. Except for the past year, however, it will be considerably larger than in any other year since 1933-34, but it will be a little smaller than the 5-year predrought average of 45.4 million head.

Average weights of hogs marketed in the past 3 years have been heavy, but in recent months average weights have been lighter than a year earlier. This tendency toward lighter weights may continue well into the 1940-41 marketing year.

The usual seasonal increase in hog marketings is now under way. The hog-corn price ratio probably will be no lower than, if as low as, in 1939-40, and the seasonal distribution of hog marketings this fall and winter may be about the same as a year earlier. This would mean that marketings in the second quarter (January-March) would be a little larger than in the first quarter (October-December). Should this be the case, the seasonal decrease in hog marketings in the second quarter of the year probably will be fairly large. Because of the expected greater reduction in the 1940 fall pig crop than in the 1940 spring crop, the seasonal increase in marketings during late spring and early summer may be very slight.

The average price received by farmers for hogs during the 1939-40 hog-marketing year was about \$5.50. Although the slaughter supply of hogs during the season was only a little larger than the predrought average, relatively small exports caused the supply of hog products for domestic consumption to be about the largest on record. With prospects for a substantial reduction in hog supplies in the coming year and further improvement in the domestic consumer demand for meats, present indications are that the level of hog prices in 1940-41 will be materially higher than in 1939-40. Export demand for pork and possibly lard does not promise to be any better, if as good, in 1940-41 as in 1939-40. But since exports have been small in the past few years, further weakness in the export demand for hog products will not constitute an important price-depressing factor. A seasonal decline in hog prices probably will accompany the fall and winter increase in marketings. But storage demand probably will be stronger this fall and winter than last, and hog prices are not likely to drop to levels so low as those reached last winter.

BEEF CATTLE: The total slaughter supply of cattle and calves marketed during 1941 is not expected to be greatly different from the supply marketed in each of the past 2 years. A decrease in marketings of grain-fed cattle now seems probable for 1941, but marketings of other cattle and calves probably will be a little larger next year than in 1940. Range feed conditions deteriorated considerably during the late summer this year. But except for limited areas, marketings of cattle this fall from Western States will be no larger than they were last fall.

Marketings of grain-fed cattle will continue large during the remainder of 1940 but probably no larger than in the last few months of 1939. Cattle feeding expanded rapidly during the 3

years 1937 to 1939. But the rate of increase began to slow down early this year, and on August 1 the number of cattle on feed in the Corn Belt was 3 percent less than a year earlier. This tendency for cattle feeding to be reduced in recent months reflects both relatively high costs of feeder cattle and feed in the 1939-40 feeding season. Present indications are that corn prices will average higher in 1940-41 than in 1939-40, and prices of feeder cattle are about the same as a year earlier.

Supplies of beef and veal produced during the remainder of 1940 probably will be a little larger than in the corresponding period of last year. But in the first half of 1941 beef supplies may be a little smaller than in the first half of 1940. Domestic consumer demand for meats during the remainder of 1940 and the first part of 1941 is expected to be a little stronger than in the corresponding period a year earlier. It seems likely, therefore, that the general level of slaughter cattle prices will be a little higher in 1941 than in 1940.

A wider spread between prices of the better grades of cattle and prices of lower grades is in prospect. In view of the prospects for moderate reduction in marketings of grain-fed cattle, prices of the better grades may average a little higher during the first half of 1941 than they did in the first part of this year. Prices of the lower grades of slaughter cattle, on the other hand, may average about the same or a little lower. The spread between prices of the upper and lower grades of slaughter cattle has been relatively narrow during most of the last 2 years, largely because of a strong demand for breeding and feeding cattle and the relatively small proportion of cows and heifers in slaughter supplies. Although the demand for breeding stock probably will continue strong, some increase in marketings of cows and heifers is expected next year.

During the period 1934 to 1938 cattle numbers on farms and ranches

were reduced sharply, with most of the reduction in the area west of the Mississippi River. Since 1938 cattle numbers have again increased, but in a large section of the range States considerable restocking is still necessary if herds are to be increased to the 1934 level. During most of 1940 the tendency to hold back breeding stock—as evidenced by the relatively small proportion of cows and heifers in total slaughter—was quite marked. Present indications are that the increase in cattle numbers during 1940 will amount to about 2 million head. This will raise the total number of cattle and calves on farms and ranches on January 1, 1941, to around 70.8 million head, compared with the peak of 74.3 million head for 1934 and the 1938 low point of 66.1 million head. Barring severe drought, the upward trend in cattle numbers probably will continue during the next 2 or 3 years. And it is likely that the 1934 peak will be exceeded before a cyclical downswing in numbers gets under way.

The continued increase in cattle numbers eventually will result in a material increase in marketings and slaughter of cattle. Should cattle numbers be maintained at about the figure expected for 1941 the number of cattle and calves slaughtered each year could exceed 26 million head, 10 percent greater than it has been in the last 2 years. And, once the downward trend in cattle numbers gets under way, total slaughter may exceed 28 million head. This would be much the largest commercial slaughter on record.

Thus, over a period of the next 5 years a material increase in the production of beef and veal is probable. If hog slaughter continues near the level of the past 2 years, this will mean a substantial increase in total meat production. Under these conditions, considerable improvement in consumer demand for meats in this country will be necessary if a sharp downward trend in cattle prices is to be avoided.

LAMBS: The 1940 lamb crop totaled 32,729,000 head. It was 3 percent larger than the 1939 crop and was the largest crop on record. Most of the increase in the 1940 lamb crop over that of 1939 was in Texas, the leading western sheep-producing State. The total crop in the other western sheep States was a little smaller this year than last, while in the native sheep States the lamb crop was only a little larger than that of last year. The large increase in the Texas lamb crop resulted from an increase in the number of breeding ewes as well as the number of lambs saved per 100 ewes. In the native sheep States, however, a marked increase in breeding ewes this year was largely offset by the small number of lambs saved per 100 ewes. Weather conditions were very unfavorable for early lambing in the native sheep States this past spring.

At this time little information is available as to the probable size of the 1941 lamb crop. However, the total United States lamb crop has not fluctuated greatly during the past 10 years, and no marked change in the 1941 crop from that of 1940 seems likely.

Slaughter supplies of sheep and lambs during the remainder of the spring lamb-marketing season (to December 1) may be a little larger than a year earlier. The increase in the 1940 lamb crop over that of 1939, however, may not be fully reflected in

increased slaughter this fall. Most of the increase in the crop was in Texas, and a large proportion of Texas lambs usually is held for marketing the following spring as yearlings. The effect of any increase in marketings over a year earlier upon lamb prices this fall will be offset or more than offset by stronger consumer demand for meats this fall than last.

Present indications point to the feeding of fewer lambs in the Corn Belt and in the Western States this fall and winter than were fed last season. Although range conditions deteriorated somewhat in late summer, it is likely that the number of lambs marketed as feeders will be smaller this fall than last. The total supply of feed grains in the Corn Belt also will be a little smaller than it was last fall and corn prices may be a little higher. Returns from lamb feeding operations were for the most part unfavorable last year, and this also will tend to hold down the number fed in the Corn Belt this fall and winter. Feeding operations in the important Colorado and western Nebraska lamb-feeding areas are expected to be reduced this fall and winter because of materially smaller feed production in those areas this year than last. If consumer demand conditions continue to improve, lamb prices during the fed-lamb marketing season (December-April) may average a little higher this year than last.

Outlook For Feeds

TOTAL acreage seeded to feed grains in 1941 may not be changed substantially from the 1940 acreage. Largely as a result of the Agricultural Adjustment Program, corn acreage during the 3 years 1938-40 was about 51 million acres below the 1928-32 average, and the combined acreage of other feed grains was 5 million acres below this average. If the in-

ducements to cooperating next year are similar to those in 1940, farmers are likely again to restrict acreage to about the level of the past 3 years.

Corn yields have averaged somewhat higher in recent years than during the period 1928-32, as a result of favorable weather and an increased area seeded to corn hybrids. This

year about 25 million acres in the Corn Belt, or over 50 percent of the acreage in the 12 North Central States, were seeded to hybrids. Some further expansion is in prospect for next year, and if 1941 growing conditions should be about the same as the average for the past 4 years yields will continue high.

If the 1941 acreages of feed grains are about as indicated above, and yields of corn and other feed grains are as high as the average for the past 4 years (1937-40), production would be large enough to furnish adequate rations for the expected number of livestock to be fed during 1941-42. The carry-over of oats on July 1, 1941, and the carry-over of barley on June 1, 1941, may be a little larger than the carry-overs of these grains in 1940. The carry-over of corn on October 1, 1941, however, is expected to be somewhat smaller than the carry-over this year.

Prices of feed grains may continue high relative to livestock prices during most of 1941, but the relationship may tend to become more favorable to livestock feeders later in the year if livestock production is reduced, as now appears probable.

Feeding ratios were unusually favorable for livestock feeders during 1937-38 and 1938-39 and producers of cash feed crops were at a relative disadvantage compared with feeders of livestock. With a comparatively small oats crop in 1939, however, and with a large quantity of corn going under seal, feed grain prices advanced relative to livestock prices during 1939-40, and during the first half of 1940 feeding ratios were less favorable to livestock producers than at any time since 1937. Ratios will probably continue somewhat less favorable to livestock producers during the coming year than during 1937-38 and 1938-39, as the loan program is expected to maintain corn prices and may give some indirect support to prices of other feeds.

SUPPLIES of feed grains and feed-stuffs for the coming feeding season will again be unusually large relative to the number of livestock to be fed. The corn supply is now indicated to be about 2,897,000,000 bushels. Of this supply it is expected that around 430 million bushels will be sealed for loan or held by the Government on October 1, which would leave less than 2,500,000,000 bushels of unsealed corn. The total supply in 1939-40 was 3,192,000,000 bushels, of which 254,000,000 bushels were sealed on October 1, leaving 2,938,000,000 bushels unsealed. During 1939-40 an additional 301 million bushels of 1939 corn were sealed during the marketing year. In early October the 1940 corn crop was safe from frost damage throughout practically the entire Corn Belt. The percentage of soft corn is expected to be small. The quality of the crop will be good, but not so good as in 1939.

The loan program for 1940 has not yet been announced, but it now appears probable that the loan rate will be about 61 cents, or 4 cents higher than last year. Since corn prices are considerably higher than a year ago and available crib space is limited, the quantity sealed is expected to be somewhat smaller than in 1939-40.

Supplies of other feed grains for 1940-41 are somewhat larger than last year, and the total feed supply, including stocks of oats July 1, stocks of barley June 1, and prospective stocks of corn October 1, plus production of the four feed grains is 115.0 million tons compared with 117.8 million tons last year.

The number of grain-consuming animal units on farms January 1 is expected to be around 132 million, as compared with 136.7 million on January 1, 1940. The supply of feed grains per grain-consuming animal unit, on the basis of these figures, will be a little larger than the large supply last year and much larger than the 1928-32 average. Excluding the quantity of

corn sealed on October 1, the supply per animal is about 4 percent smaller than the corresponding supply for last year, and about the same as the 1928-32 average.

THE large quantity of corn sealed in 1939-40, together with comparatively small supplies of other feed grains, resulted in advancing feed grain prices and relatively unfavorable feeding ratios during the first half of 1940. Since the Ever-Normal Granary program provides for the carrying of relatively large stocks of corn, and with the loan rate probably a little higher for 1940 corn than for 1939 corn, it is now expected that corn prices, during the first half of 1941 will be higher than in the corresponding months of 1940. Prices of oats and barley in the first half of next year may average lower than those of a year earlier. After the middle of 1941 prices will be influenced primarily by prospects for the 1941 production.

Disappearance of corn during 1940-41 will probably be somewhat smaller than during 1939-40. This may be offset in part by some increase in the disappearance of other feed grains. On the basis of prospective reductions in the quantities of various types of livestock and livestock products produced during the next year, it now appears likely that consumption of corn may be considerably smaller in 1940-41 than in 1939-40. In this event, the carry-over of corn would again be large, although it would be somewhat smaller than in 1939-40, and may be less than 500 million bushels. This would be the first time since 1936-37 that disappearance of corn during the marketing year was larger than production.

PRODUCTION of wheat millfeeds during the coming year may not

be greatly different from the 1939-40 production, but the volume imported is expected to be reduced. The supplies of high protein feeds, on the other hand, may be a little larger next year, as a result of prospective increases in supplies of linseed cake and meal and soybean cake and meal.

Hay supplies are again large relative to the number of hay-consuming animal units on farms. The total tonnage of hay is now estimated at 104 million tons, or about the same as in 1938, when the supply was the largest since 1927. The carry-over of hay into 1940-41 will probably be somewhat above average, and may be nearly as large as the large carry-over at the beginning of the 1938-39 marketing year. The acreage of hay in 1941 will probably again be comparatively large, since farmers can gain in total income by cooperating with the Agricultural Adjustment Program and maintaining a large acreage of forage crops. In this event, and with favorable weather, supplies of hay and other forage crops will continue large relative to livestock numbers.

THE effects of the national defense program upon the feed grain situation during the coming year will be largely indirect. Improvement in domestic consumer demand and increases in the general price level resulting from the program will be supporting factors to feed grain prices. * * * Exports or imports of feed grains are expected to be of little significance in 1940-41. Supplies of all feed grains are estimated to be adequate for livestock to be fed. No imports are in prospect. Exports of corn and other feed grains are expected to be small, unless an export subsidy program for corn, similar to that of this year, is adopted.

The Outlook For Wheat

INDICATIONS are that the acreage seeded to wheat for harvest in 1941 will be about the same as in 1940. Wheat prices in the United States are expected to continue above levels in competing exporting countries. If we should harvest another large crop, or Government loan and export subsidy programs are abandoned, domestic prices might adjust more in line with prices in competing countries.

The acreage allotted for seeding the 1941 crop under the Agricultural Adjustment Act is 62 million acres. This is the same as the allotment for the 1940 crop, when actual seedings totaled 64.4 million acres. If the total wheat seedings for harvest in 1941 are about the same as this year, and average yields are obtained, production will total about 750 million bushels. This would leave about 50 million bushels for export or addition to carry-over at the end of the season, after deducting domestic disappearance of about 700 million bushels. On this basis, the carry-over at the close of the 1941-42 season would be little different from that at the beginning, when it is expected to be 325 million bushels or more.

THE annual average yields per seeded acre in the United States usually vary between about 10 and 14 bushels. A 10-bushel yield on an acreage the same as this year would result in a crop about 50 million bushels short of average annual domestic disappearance and thereby reduce the moderately large carry-over. While average yields usually vary only between 10 and 14 bushels per seeded acre, in exceptional years yields have been very small as a result of severe winter kill and drought. Even with a small crop, ample supplies of milling wheats for the year beginning July 1, 1941, are assured because of large carry-over stocks in prospect at that time.

A yield of 14 bushels per seeded acre would result in a crop materially above domestic disappearance and export probabilities, and would add to the carry-over stocks. In the latter event, the carry-over at the close of the 1941-42 marketing season might possibly be increased by about 150 million bushels, depending upon export opportunities. Present indications are that insect pests will affect the coming crop to about the same extent as they did the 1940 crop. Somewhat more than normal grasshopper and chinch bug injury may again occur in the North Central States, while injury from hessian fly and other insects is likely to be about normal or less in all areas.

WORLD acreage in 1941 may not be greatly different from the 275 million acres in 1939. War activities are not expected to have much effect on the acreage in Europe. The acreage for the 1940 crop was reduced largely as the result of unfavorable weather for both fall and spring seeding and also above normal winter kill. If weather should be more normal it is probable that the 1941 acreage may be increased compared with the 1940 crop, possibly equalling or even exceeding the 1939 acreage. It is too early to appraise the probabilities for the 1941 Canadian wheat crop or the 1940-41 wheat crops in Australia and Argentina, but there is little reason to expect a material reduction in the total acreage for these countries from the 1939 levels, the last year for which complete figures are available. Average yields on 275 million acres would result in a crop almost equal to probable world consumption, and thus would not significantly reduce the large world carry-over stocks.

Unless the acreage is materially smaller than is now expected, or yields per acre are small, large world supplies will continue during the 1941-42 sea-

son. Wheat prices in the United States, on the other hand, are expected to remain independent, to a considerable extent, of prices in other countries. A large crop, or abandonment of the loan and export subsidy programs, however, would probably cause domestic prices to be more dependent upon the factors which affect prices in

other countries. The large quantities of wheat held under loan in 1938-39 and 1939-40 operated to support domestic prices. With prospective large supplies in other surplus producing countries, exports from the United States in 1941-42 are expected to be of only moderate size—even with a subsidy program.

World Cotton Supply Increased

WORLD supply of cotton for the 1940-41 season will be a little larger than the near-record 1939-40 total of almost 49 million bales. Tentative estimates of stocks carried over and of the new crop indicate a supply probably one-fifth to one-sixth larger than the 1928-37 average. Slightly more than half of the indicated supply, or approximately 25 million bales, will be of so-called "American" or United States-grown cotton. The supply of American, about half of which is cotton carried over from the previous season, is about the same as in each of the last 2 seasons. It is only 1 million bales less than the record high of 1932-33, and 3 million bales larger than the 1928-37 average.

Largely because of restricted export outlets, the pressure of the near-record supplies on prices is greater this season than last. Practically all of continental Europe (excluding Russia), where in the 5 years ending July 1939 consumption of imported cottons averaged roughly 5 million bales including 2½ million bales of American, is cut off from exporting countries by the British blockade. If the blockade is continued, little cotton will be imported into this important consuming area during the current season. This, together with less favorable consumption prospects in Japan, China, and Great Britain, will materially reduce world exports and consumption.

These conditions, and wide price disparities between American and the

more important competing foreign cottons in most of the accessible markets, reduced exports of American cotton in August and September of 1940 to 140,000 bales. This was about 85 percent less than a year earlier and the smallest for the period since 1879. Total exports for the 1940-41 season even one-fourth as large as last season would require a greatly accelerated annual rate of shipments for the remainder of the marketing year. Through a reduction in stocks, foreign consumption of American cotton may possibly exceed domestic exports by 1 or even 1½ million bales.

THE shock of the loss in export markets for American and foreign cottons is being cushioned by the United States Government's loan program. With about 8¾ million bales of Government financed stocks as of September 30 inaccessible to cotton merchants and spinners at existing prices, domestic prices were being supported at about the 1940 loan rates. These rates are for the most part from 0.21 to 0.35 cents higher than the 1939 rates. With the higher loan rates and prospects for larger United States consumption, domestic prices averaged a little higher in early October than a year earlier. Prices were only slightly higher than the average for 1937-38 and 1938-39 when, except for 1931 and 1932, prices were the lowest since the beginning of the World War in 1914. If prices continue about as

in early October, the considerably larger indicated production would give cotton producers an 8 to 10 percent larger return from cotton this season than last. Such returns, however, would be about one-half of the average for the decade of the 1920's.

In contrast with the prospective sharp decline in exports and foreign consumption, consumption prospects in the United States are exceptionally favorable. Under the stimulus of the defense program, domestic business activity, employment and pay rolls are expected to average considerably higher than in 1939-40 when industrial production reached a new high. This should stimulate consumer purchases of cotton clothing and household goods. Also Government purchases of cotton textiles, including those for national defense, will be much larger than in the previous season. Furthermore the expanded Government cotton products export payment program and reduced competition from European textiles should result in a substantial rise in exports of cotton textiles. In view of these developments, and reasonably small present stocks of cotton goods, domestic mills seem likely to consume considerably more than 8 million bales of cotton during the year ending July 1941. Consumption may total $8\frac{1}{2}$ to $8\frac{3}{4}$ million bales, particularly if Government purchases for defense purposes should be as impor-

tant as some observers believe. Consumption totaled $7\frac{1}{4}$ million bales last season. The record high was in 1936-37 when nearly 8 million bales were processed.

REDUCED consumption in foreign countries is expected to much more than offset the increase in the United States. It may reduce world consumption in 1940-41 to the lowest level since the early 1930's. This and the indicated 1940 crop is likely to give a world carry-over on August 1, 1941 materially larger than the $20\frac{1}{2}$ million bales in 1940 and somewhat larger than the record high of 22½ million in 1938. Even with a substantial reduction in next year's world crop, therefore, the 1940-41 supply of raw cotton might again be only a little below the 50 to 50½ million bales record of 1937-38 and 1938-39. With no reduction in production, next season's world supply probably will reach a new high. On the basis of the October crop estimate and with a continuation of the war about as in early October, the August 1941 world carry-over of American cotton may approach or even exceed the 1939 peak of more than 14 million bales. All but about 1 million bales or less of the American cotton carried over is likely to be in the United States, most of it owned or held as collateral by the United States Government.

Tobacco Outlook For 1941

THE tobacco outlook continues to be clouded by the uncertainty surrounding important export outlets for some types, especially for flue-cured, dark fire-cured, and dark air-cured types. Tobacco types not so markedly dependent on export demand continue to indicate roughly the same future trends as were in evidence last year. Southern Maryland tobacco continues to show a satisfactory

market outlook. Until recently, the Burley outlook was marked by the increase of stocks over 1939 levels, but the prospective smaller 1940 crop will help to bring supplies more in line with disappearance. Cigar tobaccos indicate about the same outlook as last year for wrapper, with further decreases in stocks of filler and binder types in the face of probable slightly increased consumption.

The export situation at the beginning of October finds the continent of Europe temporarily closed to our exports of dark tobacco and Maryland leaf, and the prospect for flue-cured exports is highly problematical. Great Britain, the most important purchaser of flue-cured, continues the tariff preference to Empire-grown leaf, and there is no likelihood of any immediate change in this policy. Largely as a result, the production of flue-cured leaf in the colonies and Dominions has been steadily increasing, and there are factors which indicate a continuation of this trend. Together with lower prices for some leaf, this has induced an increasing percentage of Empire-grown leaf in total British home consumption of tobacco.

The rate of increase in consumption of Empire tobaccos, declining in recent years, seems again to be up, due largely to the need of conserving foreign exchange resources derived from non-Empire areas. Since it appears that total tobacco consumption in 1941 is to be cut to about 90 percent of that during the year ending March 31, 1940, and an admixture of 4 percent of Turkish and Greek tobaccos is in prospect, the outlook for exports of American flue-cured is further weakened. British stocks of American flue-cured tobacco must be replenished over the next few years. However, they may never return to the old level, and British imports during these years may be spaced during the period in unpredictable ways within fairly broad limits. Our next most important export outlet for flue-cured is China, and next year this will probably show a decline from the relatively high levels of the last 2 years.

NEXT year the total consumption of tobacco in the United States should show an increase, possibly as great as in 1939. As is usual during

periods of increasing industrial activity, there will probably be some shifting to the higher priced grades of each product; equally important, there will be some shifting in the proportions of the various products used. Cigar consumption probably will continue to rise at about the 1939-40 rate. Chewing tobacco may decline slightly. Cigarette consumption, already on a high level, should be maintained if not increased.

Flue-cured tobacco is particularly affected by the export situation. The growers' referendum of July 20, 1940 approved continuation of marketing quotas for the 3-year period 1941 through 1943. This will probably result in crops of about 600-700 million pounds for the next few years. The decrease in production will help pull down the large bulge in stocks resulting from the record 1939 crop which coincided with the cessation of most of the British export demand. Improved domestic demand should also aid in bringing the situation under control. However, compared with the 1934-39 period, the outlook for cash income from tobacco for flue-cured growers as a whole is unfavorable for the coming year. As an illustration of what probably lies ahead, although prices this fall average distinctly higher than last year, the curtailed production necessary to bring the market situation under control will result in cash income markedly below that of 1939.

UNFAVORABLE weather conditions, particularly in the northern part of the burley area, materially altered the outlook for burley during the last few months. The final size and condition of the crop is still uncertain, but, it seems clear that production will fall below disappear-

ance, and next year will probably see a return to a more normal situation. * * * Fire-cured and dark air-cured tobaccos, because of increases in stocks for some types for the second successive year and the virtual closing of the continental European market after June 1940, are in an unfavorable position.

Maryland tobacco should present a satisfactory picture. Danger might ensue from a considerable increase in production based upon this year's prospective highly improved growers' income. Increased production would not be warranted in view of the closing

of export outlets in Europe that from January through May 1940 took about 1,168,000 pounds of Maryland tobacco, and during June and July took not a single pound. * * * The outlook for cigar types as a whole, still uncertain at this early date, should be further improved next year over the relatively satisfactory situation in 1940. Consumption increases are likely, and the stocks situation during coming months should place the crops in a definitely favorable light. There are indications of an impending shortage of desirable grades of Pennsylvania filler.

Horses and Mules

FURTHER moderate decreases in the number of horses and mules on farms are expected in the next few years, as the tendency toward replacement of work stock by tractors continues. No marked increase in prices of horses and mules seems probable next year. Although a smaller number will be available, the outlet for horses probably will continue restricted. Exports of horses have not been and are not likely to be stimulated by the European war. It is probable, however, that purchases of horses by the United States Army will increase somewhat in the next year under the National Defense Program. Larger purchases of tractors and related equipment for military purposes may be accompanied by advances in prices of tractors to farmers. Such developments probably will prevent further declines in prices of horses and mules during 1941.

Prices of horses and mules have declined steadily since 1937. In the first half of 1940 prices were lower than at any time in the past 5 years, al-

though they continued much higher than in the 1930-34 period. Part of this decline, perhaps much of it, can be attributed to increased tractor competition. Sales of tractors in the United States increased from 144,000 in 1938 to 179,000 in 1939. The proportion of small, high-speed, single-plow type of tractor sold has increased during the past 2 years, and such tractors are replacing horses on small farms.

The number of horses and mules on farms on January 1, 1940, amounting to 14.9 million head, was about 260,000 head smaller than a year earlier. The total number of horse and mule colts raised in 1939 was slightly larger than in 1938 but not as large as in 1937. Colt production, however, is well below the number of animals needed to replace old work stock. The number of mule colts raised increased materially in both 1938 and 1939, but the number of horse colts declined in both years. Sleeping sickness among horses apparently has been less prevalent in 1940 than in either 1938 or 1939.

Fats, Oils, and Oilseeds

DOMESTIC demand for food and soap fats, and for drying oils, is expected to be stronger in 1941 than in 1940, mainly as a result of increased industrial and building activity arising in part from the defense program. But if the British blockade of continental European markets is continued, abnormally large supplies of such foreign items as coconut oil and copra, palm oil, palm kernels, and flaxseed will be available for shipment to the United States. Under such circumstances, any rise in prices for domestic fats and oils would be limited by increased imports. Nevertheless, some improvement in prices for lard, tallow, and greases seems to be indicated on the basis of the prospective domestic supply and demand situation.

Production of fats and oils in the United States for the calendar year 1940 apparently is the largest for all years on record. Factory production during the first 6 months of the year was reported to be 11 percent greater than in the corresponding period of 1939. Lard, inedible tallow, greases, and soybean oil accounted for most of the increase.

PRICES of most domestic fats and oils during 1940 have been low in comparison with those for the past 5 years, not only because of increased production but also because of reduced exports for lard brought about by the growing competition from hardened vegetable and marine oils in European markets in recent years, the present restrictive nature of British buying policy, and the blockade of most of continental Europe. Lard prices in 1940 have been the lowest since 1933, and tallow and grease prices have been the lowest since early 1934.

Supplies of domestically produced fats in 1941 are expected to be somewhat smaller than the large supplies of 1940. Lard and grease production, as a result of a reduction in the pig

crop in 1940, probably will be substantially smaller than a year earlier, and tallow production also may be reduced. Production of soybean oil and peanut oil, on the other hand, is likely to be increased. The total supply of cottonseed oil probably will be little changed, with increased production being about offset by reduced stocks.

Imports of fats, oils, and oil-bearing materials have been smaller so far in 1940 than a year earlier, chiefly because of the prevailing large supplies and low prices for domestic fats. Even though supplies of oils and oilseeds in exporting countries are very large, no material increase in imports seems likely so long as prices for domestic fats continue low.

THE supply of cottonseed for the 1940-41 season is estimated at 5.7 million tons compared with 5.4 million tons a year earlier, and 6.2 million tons, the average for the 10 years 1928-37. Mill stocks of cottonseed on August 1 amounted to only 39,000 tons, less than a third of the quantity on hand a year earlier. But production of cottonseed, as indicated by conditions September 1, is expected to total about 5,671,000 tons, or more than 400,000 tons larger than in the 1939-40 season. Present indications are that prices of cottonseed may not average quite as high this season as last, when prices rose sharply during the fall and early winter months.

Despite the increased production of cottonseed, the supply of cottonseed oil probably will be no greater this season than last. Mill stocks of oil (crude basis) on August 1 were approximately 100 million pounds less than a year earlier. And the increase in oil production, assuming that about the same proportion of the total seed supply will be crushed as in the 1939-40 season, probably will not be in excess of this amount.

The peanut-diversion program probably will be conducted on a more extensive scale in the 1940-41 marketing season than a year earlier, since the 1940 production of peanuts, estimated at 1,511 million pounds on the basis of conditions September 1, is expected to be more than 300 million pounds larger than in 1939 and will be the largest on record. With the diversion program and improved demand for peanut products, peanut prices in 1941 are likely to be maintained near the relatively stable level of recent seasons, despite increased marketings.

Because of poor yields, the soybean crop for 1940 is indicated to be slightly smaller than the record crop for 1939. But domestic crushings in 1941 are expected to be larger than a year earlier, mainly because of the loss of export outlets resulting from the blockade of continental European marketings. Approximately 11 million bushels of soybeans were exported in the 1939-40 marketing season, chiefly to the Netherlands and Scandinavian countries. Total supplies of soybean oil and meal in the United States in 1941 probably will be larger than in 1940. But prices of soybeans and soybean products will be supported by the improvement in general demand conditions and by the prospective reduction in lard supplies.

UNITED STATES production of flaxseed for 1940, estimated at 30.7 million bushels, is the largest since 1924 and is greater than total crushings of domestic and imported seed in the 1939-40 marketing year. Some increase in crushings is anticipated for the current season, in view of the rising trend in building activity and the consequent improvement in demand for linseed oil for use in paints. The domestic supply (production plus stocks) of flaxseed in the current

season is expected to total more than 34 million bushels, which probably will leave little room for imports. Net imports of flaxseed amounted to 13.2 million bushels in the 1939-40 season compared with 18.7 million bushels a year earlier and 16.4 million bushels, the average for the previous 10 years. Imports in 1940-41 may not total more than 6 million bushels.

Although supplies of flaxseed in Argentina and Uruguay are now seasonally small, the usual export markets, aside from the United States, are largely cut off by the British blockade. If the war in Europe is continued, South American supplies of flaxseed are likely to become burdensome next winter when the new crop is harvested.

Further improvement in domestic demand for paints is in prospect for 1941. But the effect of this improvement on prices of both flaxseed and linseed oil is likely to be outweighed by developments in Europe. A continuation of the war, with restricted demand for flaxseed on the Continent, probably would mean that prices would remain low. The reopening of continental European markets to world trade, on the other hand, undoubtedly would be accompanied by some advance in prices.

LOOKING beyond 1941, it seems probable that unless commodity prices generally score sharp advances the prices of domestic fats and oils will continue at a relatively low level so long as continental European markets remain closed to world trade. Although prices undoubtedly would be stimulated by a reopening of European markets, the advances probably would not be long maintained, since world productive capacity for fats is now at a high level and may be expected to increase in the future.

The Dairy Outlook For 1941

THREE factors stand out as of particular importance in the outlook for dairymen for the coming year: (1) A widespread tendency for farmers to increase the number of milk cows. This trend has been in progress for over 2 years and promises to continue further; (2) prospect for a moderately higher level of industrial activity, consumers' income and wholesale prices in 1941 than in 1940; (3) prospect for an increase in exports of manufactured dairy products and a sharp curtailment in imports of cheese.

Production of milk in 1941 will probably be somewhat larger than the peak production in 1940, provided pastures and feed production in 1941 are about average or better. Improvement in demand is expected to offset the effect of larger production on prices, so that prices of dairy products in 1941 may average as high as and possibly somewhat higher than in 1940. Thus, the outlook is for a moderate increase in income from dairy products.

DROUGHTS in 1934 and 1936 and the low prices of cows caused many farmers to reduce their dairy herds. The number of milk cows was reduced 8 percent, from January 1, 1934, to January 1, 1938. But in the last 3 years the trend has been upward. By January 1, 1941, the number of milk cows on farms is expected to be about 25,800,000 head. This would be the largest number since 1935, and exceeded only during the 3 years 1933-35. This number of cows is high in relation to other years, but not unusually high in relation to the number of people.

More striking has been the increase in the number of heifers. On January 1, 1940, the number of heifers 1-2 years old was 6 percent larger than a year earlier and 11 percent larger than 2 years earlier. By January 1, 1941, the number of heifers is expected to be about 5,400,000 head. This is about

the same as the peak a year earlier, and is high in relation to the number of cows. The number of heifer calves being saved for milk cows on January 1, 1941, is expected to be about 5,700,000 head. Heifers of this age ordinarily would be added to milking herds in 1942. The number of young stock is more than enough to provide for ordinary replacements for dairy herds in 1941 and 1942.

The actual increase in cow numbers will depend to a large extent on the rate of culling. In areas where a considerable proportion of the cows milked are of dual-purpose type, there may be some shifting of cows from a milk cow to beef cow classification, depending on the relative prices of beef and butterfat. Prices of beef cattle have been high in relation to prices of butterfat during the past year. Supplies of feed grains and byproduct feed per animal unit are relatively large for the coming feeding period. Hay supplies per animal unit are also above average.

DURING the 1939-40 out-of-storage season (September 1 to May 1) milk production per cow averaged 13.15 pounds per day. This was about the same as the peak production for that period in 1938-39. For the coming winter feed supplies are ample, prices of milk and butterfat have been about average or above in relation to prices of feeds, and somewhat higher than a year earlier in relation to prices of meat animals. It seems probable that milk production per cow during the coming feeding period may be about as large as the preceding high for that season of the year. With the increase in the number of cows this would indicate an increase of about 2 percent in total milk production to a new peak for this period.

Milk production on farms in 1939 was estimated to be 108.6 billion

pounds. This was about 1 percent above the preceding high in 1938. For 1940 production will probably be about 110 billion pounds or 857 pounds per capita. Production per capita in 1940 is about the same as the preceding peak in 1933 but about 4 percent above the 1924-29 average. It seems probable that with increases in the number of milk cows, the trend in milk production will continue gradually upward as long as feed supplies are ample. With ample feed supplies the outlook is for milk production per capita during the next year or two to be about as high as ever reported.

PRICES of the principal dairy products during the summer of 1940 averaged considerably higher than in the summer of 1939 and in many cases the highest since 1937. The improvement in prices during the past year was due primarily to the higher level of general business activity and consumer incomes, and in part to the lower level of storage stocks. During the coming year a higher level of business activity and a moderate increase in the general price level, due in large part to the defense program, are in prospect. Those developments will stimulate the domestic demand for dairy products and will tend to raise prices.

Consumption of ice cream is affected more by changes in urban prosperity than the consumption of any other dairy product. During 1940 the production of commercial ice cream has probably exceeded the previous high in 1939. Further increases appear in prospect. Consumption of fluid milk and cream is also affected by changes in consumer incomes, but to a much smaller extent than ice cream. During the depression of the early 1930's fluid cream consumption declined much more than milk.

Receipts of fluid milk at the principal eastern markets indicate that consumption in these markets in 1940

was somewhat higher than in the pre-depression period in 1929-30. Cream consumption however has not recovered to the 1929-30 level. A higher level of consumer incomes in 1941 might be expected to result in some increase in fluid milk and cream consumption. In many markets there is a relatively wide spread between retail prices of evaporated milk and fresh milk and cream. This spread may retard increases in the consumption of fluid milk and cream.

In the past decade there have been marked increases in the consumption of the principal manufactured dairy products. Evaporated milk and cheese have shown the most striking increases. Some further expansion in total consumption is in prospect.

THE war in Europe has brought about a marked expansion in our exports of manufactured dairy products, particularly concentrated milks. Further increases in 1941 are expected. In the period 1914-18 British imports of butter were greatly reduced, cheese imports showed relatively little change, while imports of canned milk expanded greatly. In the present situation British Dominions can supply large quantities of butter and cheese. Prior to the outbreak of the European war, however, the Netherlands and Denmark were the leading countries in exports of canned milk. With exports from these countries cut off, the United States has become the principal exporter. Our exports to Great Britain, also to nonbelligerents, have increased. This is likely to continue.

Changes in exports however are of minor importance to dairymen, as compared with the general trend of prices, employment, and pay rolls in this country. It is the improvement in the domestic market that is the basis for moderate improvement in the dairy outlook.

The Fruit Outlook For 1941

A HIGHER general level of consumers' income in 1941 compared with 1940 is a favorable factor in the outlook for fruit crops produced in the United States. But the almost complete loss of export outlets for most fruits and fruit products will offset to some extent this improvement in domestic demand. It appears that a greater portion of the Nation's fruit crops and products for both 1940 and 1941 will have to be marketed in the domestic market or disposed of through some kind of diversion program. It is also probable that some of the costs of packaging and marketing will be trimmed in order to narrow the spread between consumer and grower prices. The total cash income from fruit production in 1941 probably will be substantially higher than in 1940 and perhaps the highest in the last 10 years.

Although it is impossible to determine at this time what the size of the Nation's fruit crop will be in 1941, the probabilities are that it will be somewhat larger than in 1940 when relatively short crops of deciduous fruits were produced. Combined production of eight major deciduous fruit crops (peaches, pears, grapes, cherries, plums, prunes, apricots, and commercial apples) in 1940 is indicated to be about 13 percent smaller than in 1939 and 1 percent below the 5-year (1934-38) average. Prospects point to materially larger crops of citrus from the bloom of 1940 than from that of 1939. Average growing conditions in 1941 probably would result in increased output of the deciduous fruits and the trend of citrus production is sharply upward. Barring an unfavorable growing season, heavy frost, freezes, storms, etc., therefore, the prospect is for larger total fruit production in 1941 than in 1940.

DURING the 1939-40 season fresh fruit exports were reduced materially by the war in Europe. There

was a good movement of dried and canned fruits into export channels until the spring of 1940 when the expansion of hostilities into western Europe cut off most of the foreign outlets. During the summer of 1940 the export movement of all fruits and products was near the lowest on record, and there is little prospect for recovery at least until the war is over. Great Britain, the principal outlet for canned fruits and an important outlet for fresh and dried fruits, has restricted imports through import licenses and exchange controls, and there is little prospect that these will be removed in the near future.

In the period July 1939 to June 1940, exports of fresh apples from the United States decreased 73 percent, fresh pears 46 percent, oranges 49 percent, grapefruit 36 percent, and lemons 30 percent, from those of 1938-39. Exports of dried apples in the same period were down 47 percent, dried prunes 44 percent, raisins 17 percent, and all dried fruit 31 percent. The export of dried apricots increased slightly. Since the restrictions on imports of canned fruits into Great Britain were not effective until the spring of 1940, the export of these products from the United States during 1939-40 decreased only about 4 percent from that in 1938-39.

Normally exports of all fruits—fresh, dried, and canned, on a fresh-fruit basis—comprise about 11 percent of total production. From the standpoint of the fruit industry as a whole this does not appear to be a very large proportion, but from the standpoint of certain fruit crops—such as those for which the principal market outlet is the dried fruit trade, exports comprise about 40 percent of the pack. Exports also comprise a significant proportion of the pack of certain canned fruits. It is probable that the increase in consumer purchasing power in 1941 will be sufficient to offset the

unfavorable effect of losses in the export outlet for fresh fruits and to a large extent for canned fruits, but not for dried fruits. For this reason marketing programs are being developed which will provide for the diversion of large quantities of dried fruits to other than normal trade channels.

THE long-time outlook is for continued expansion of fruit production in the United States unless severe freeze and storm damage or a tree-pulling program results in a reduction of bearing-tree numbers. With average growing conditions apple production may be expected to decline slightly, but citrus production is likely to continue to expand during the next 5 years. A large proportion of the orange, grapefruit, and lemon trees has not yet reached full bearing capacity and a small new acreage is being planted each year. The general level of production of peaches and pears probably will show a slight increase during the next 5 years and cherry production is likely to expand further. Recent plantings indicate that grape production in California probably will continue to increase.

This prospective increase in fruit production is a continuation of the trend of the last 2 decades. The volume of fruit production during the five seasons 1934-38 averaged about two-fifths larger than that of the 5-year period 1919-23. During this period the trend of apple production was

moderately downward, while orange and lemon production was about doubled. The grapefruit crop in recent years is about four times as large as the 1919-23 average. Significant increases also occurred in the production of grapes, pears, apricots, strawberries, cherries, and plums and prunes.

Under the pressure of these increasing supplies, fruit prices failed to recover as much from the depression lows as other agricultural prices, and the prices of those fruits having the largest production increases show the smallest gains. In fact, prices of certain fruits, the citrus fruits for example, the production of which has increased tremendously, were lower in 1938-39 than during the depression period. In such cases the influence of the upward trend of production more than offsets the influence of the recovery in consumer purchasing power. Because of the nature of the demand for all fruits combined, however, the total cash income received from fruit production has increased in recent years. As a general rule, year-to-year changes in the size of the total fruit crop have little influence on the amount of cash income received from fruit production. But as consumer purchasing power rises or falls cash income also rises or falls. It is probable, therefore, that with a higher general level of consumer purchasing power next year there will also be an increase in the cash income from fruit production.

The Vegetable Outlook For 1941

WITH a general rise in consumer purchasing power in prospect for 1941, producers of potatoes, sweet-potatoes, and truck crops in the United States may expect to receive larger incomes from the production of these crops than were received in the last several years. Increased plantings

of most of these crops are in prospect for 1941, but it is probable that the effect of this on prices generally will be more than offset by the improvement in demand. It is probable therefore, that prices received by producers of most of these crops will average slightly higher in 1941 than in the

last few seasons, and that the improvement in incomes will be greater.

For the country as a whole the acreage of potatoes and truck crops for market may be increased only slightly, whereas that of truck crops for processing and of sweetpotatoes may be increased moderately. These changes in acreages are expected to occur largely as a result of the changes in the level of prices received for the 1940 crops compared with those of the previous years.

It is probable that the United States potato acreage will be increased slightly in 1941 over that planted in 1940. An increase in plantings in the early States is expected to be largely offset by a decrease in intermediate States. On the basis of the present price prospect for the late 1940 crop, it is probable that the acreage planted in the late States in 1941 will be increased slightly over that planted in 1940. The slightly larger plantings for the country as a whole with yields equal to the average of the last 4 years, would result in a total United States potato crop about the same as the 383 million bushels indicated for 1940.

A slight increase in plantings of sweetpotatoes is in prospect for 1941. The acreage was reduced about 8 percent in 1940, and this reduction, together with a slightly lower yield per acre, resulted in the smallest crop since 1936. Ordinarily the sweetpotato acreage in the South varies inversely with the price of cotton of the previous season, and in the commercial areas directly with the price of sweetpotatoes of the previous season. In 1941 it is probable that the acreage in the South will be little different from that planted in 1940, but in the commercial areas it probably will be increased slightly because of the higher level of prices prevailing in the current season.

THE United States acreage of commercial truck crops for fresh market shipment decreased slightly in 1940

from that harvested in 1939. This decrease resulted largely from the freeze damage and unfavorable growing conditions in the Southern States during the early part of the year. In 1941 it is probable that plantings will be increased slightly and, barring severe weather damage, the total acreage for harvest may be slightly larger than in 1940. The acreage of these crops has increased sharply during the last 2 decades, but it now appears that the upward trend is becoming less pronounced. For the country as a whole it is probable that increases will occur in the 1941 acreage of most of the important truck crops, except perhaps lima beans, cabbage, cauliflower, celery, and watermelons. Because of the relatively high prices received in 1940 for many of the early truck crops, it is likely that the acreage of many of these will be increased substantially in 1941. The acreage of early snap beans, beets, cucumbers, eggplant, onions (Bermuda), peppers, and tomatoes, particularly may be increased materially in 1941.

Although the total harvested acreage of truck crops for market in 1940 was slightly smaller than in 1941, the tonnage of these crops produced was slightly larger. Yields were below average in some of the early-producing sections but in many of the intermediate and late States yields were better than average. Despite the increased tonnage available for marketing, prices and incomes to growers were increased over those received in 1939. These higher prices and incomes resulted largely from an increase in consumer purchasing power. In 1941 a further moderate increase in consumer purchasing power is expected to take place, and probably will result in some further advance in the general level of truck crop prices. For those crops for which production is increased substantially, however, the price rise may not materialize and there may be some declines.

THE acreage and production of truck crops for processing is expected to be increased somewhat in 1941 over that of 1940. The current season marked the first year in the upturn of the "cycle" which seems to have 3 years of increasing acreage followed by 2 years of declines. The acreage and production of these crops in 1939 was at a cyclical low point but there were substantial increases in the major crops for processing in 1940.

Unusually high yields of peas in 1940 resulted in an unusually large pack of about 25.5 million cases, which is likely to result in an increased carry-over in the spring of 1941. This large carry-over may tend to cause canners to contract for a smaller acreage of peas in 1941. Yields of some of the other crops, such as snap beans, sweet corn, and tomatoes, however, were disappointing and it is probable that the statistical position of these products at acreage contracting time in

1941 will be unusually strong. This situation probably will result in some increase in the planted acreage of these crops. Since acreage and production of these crops are usually contracted for in advance of planting time, income therefrom usually varies directly with the acreage and production. It is probable, therefore, that if the acreage is increased in 1941, cash income from production will also increase.

The combined pack of important canned vegetables in 1940 is expected to total about 103 million cases (24 No. 2 cans) compared with 94.9 million cases in 1939. The carry-over from the 1939 pack is close to 11.5 million cases or less than one-half of that of the previous season. It is indicated, therefore, that the supply of canned vegetables for the 1940 marketing season will total about 115 million cases compared with a supply of 120.1 million cases and a total disappearance of about 108.6 million cases in the 1939 season.

Dry Edible Beans

BECAUSE of the prospect of increasing carry-over stocks and declining prices, the acreage planted to dry edible beans in 1941 probably will be decreased slightly from that planted in 1940. A planted acreage about like that in 1938 and 1939, with average abandonment and yields equal to the average of the last 4 years, would result in a crop of 13.6 million bags. This quantity would be about equal to average domestic disappearance for recent years.

An increase in the planted acreage in 1940 of 7 percent resulted largely from a rise in the general level of bean prices occasioned by a strong export demand during the first half of the 1939-40 marketing season. During recent months the export demand has decreased somewhat, and in August bean prices declined rather

sharply. A contributing factor to the price decline was the improvement in the prospect for the 1940 crop.

On the basis of September 1 reports, the new crop is indicated to total 16.1 million bags compared with 14.0 million bags produced in 1939. This crop, plus a carry-over estimated to be about the same as the large carry-over a year earlier, indicates a total supply of close to 18.3 million bags, or slightly more than the total of 17.3 million bags in 1939-40.

THE export outlook for the 1940 season is not as bright as that of the 1939 season. Some foreign markets available to the United States in the first half of the 1939 season have been eliminated by the spread of hostilities in Europe. Also it is

probable that some of the competing producing areas will have larger supplies this season than in 1939. Exports for the 1939-40 season totaled nearly 793,000 bags, compared with 298,000 bags in 1938-39 and were the largest since 1920-21. Also there was a sharp increase in the export of canned beans. Although there were sharp increases in the export movement to northern and western Europe, there were also increases in exports to Western Hemisphere countries, particularly Canada and Cuba. Most of the European markets will be cut off in the 1940 season, so it is probable that the total volume will be reduced

by approximately one-half in the current season.

This loss in exports, together with a slightly increased supply in the 1940 season, is expected to result in a larger carry-over in September 1941 despite the fact that domestic disappearance may be increased somewhat. It is indicated, therefore, that acreage and production of beans in the United States as a whole probably will be curtailed in 1941. Prospects for the individual classes of beans are variable, and adjustments in next year's production probably will be in accordance with the supply situation at planting time.

Wool and Mohair

DOMESTIC wool prices in the next several months will be supported by strong demand for wool in this country. But with imports of wool entering the United States in relatively large quantities, prices of wool in the United States will depend to a considerable extent on prices paid for imported wools. The quantities of Australian and South African wool released for export and the prices fixed for such wools by the British Government will be important factors affecting foreign wool prices.

It is likely that the stimulating effect upon prices of the strong military demand for wools in Great Britain and the United States will be partly offset by the fact that wool supplies available to Great Britain and the United States are now much greater than before the war. With most continental European countries now included in the British blockade, the United States, the United Kingdom, and Japan are likely to be the only important importers of wool so long as the blockade is maintained. Relatively large supplies of apparel wool will be available for United States buyers in Argentina and Uruguay.

Mill consumption of apparel wool in the United States in late 1940 and early 1941 is expected to be considerably greater than a year earlier as Government orders are filled for clothing and blankets purchased for the increasing number of men placed under military training under the Selective Service Act. Prospects for the manufacture of wool goods for civilian uses are rather uncertain. Increases in incomes of consumers and a greater volume of retail trade later this year may stimulate mill consumption for civilian uses to some extent. Even if a decrease in such consumption from last year's level should occur, it probably would be more than offset by increased volume of manufacture for Government orders.

MILL consumption of wool in the United States thus far in 1940 has been somewhat smaller than in the same months last year. But consumption of apparel wool in 1939, totaling 674 million pounds, grease basis, was larger than in any recent year except 1935. Mill consumption declined sharply after October 1939.

The supply of wool in all positions in the United States on September 1 is estimated to be somewhat larger than a year earlier, but the supply is small in relation to probable domestic consumption during the next several months. Mill consumption from September 1939 through March 1940 totaled about 365 million pounds. If mill consumption in the remainder of the 1940 season (to April 1, 1941) is to exceed that of the same period a year earlier by a substantial margin and if stocks at the end of March are to be fairly well maintained, a larger volume of imports of apparel wool will be necessary in the coming 5 or 6 months than was imported in the same months of last season. In the period September 1939 through March 1940 imports of apparel wool totaled 115 million pounds. Imports of apparel wool thus far in 1940 have been larger than imports for the same months of any recent year except 1937.

Prices of wool in this country rose sharply following the outbreak of the European war in September 1939. This rise was brought about by the prospects for a strong war demand for wool in certain foreign countries and the small stocks and relatively high mill consumption of raw wool in the United States. Imports of wool were fairly large in late 1939 and early 1940. The decline in mill consumption after October 1939 was accompanied by a moderate decline in wool prices which continued through the first half of 1940. However, wool prices remained substantially higher than prices prevailing before September 1939.

A further increase in wool prices would give greater stimulus to the use of rayon staple fiber in blends with wool for cloth for civilian use in this country. The domestic production of staple fiber rayon was estimated at 53 million pounds in 1939. (Pro-

duction was less than 5 million pounds in 1935.) In addition, 47 million pounds of staple fiber were imported into the United States in 1939. The price of staple fiber rayon suitable for blending with wool is now much lower than the price of wool on a scoured basis.

MOHAIR: Demand for mohair in coming months will be supported by a probable relatively high output of automobiles and by increased demand for medium and coarse wools in the United States. Mohair prices declined moderately in the early part of 1940 but prices continued substantially higher than those prevailing before September 1939. Prices in Texas in the latter part of September 1940 were reported at 45 to 50 cents per pound for adult hair and 55 to 60 cents for kid hair. The bulk of the 1939 clip was sold in Texas at about 40 cents for adult hair and 50 cents for kid hair. As mohair is frequently used for the same purposes as medium and coarse wools, recent higher prices for such wools are a strengthening influence on mohair prices.

Mohair production in 1940 will at least equal, and probably exceed, the 18.7 million pounds produced in 1939. The 1939 production was larger than in any previous year except 1931. Fall range conditions are very favorable in Texas and mohair production in 1941 may increase.

Production of mohair in the United States in recent years has been almost sufficient to fill domestic requirements and imports of mohair have been relatively small. For the period January through July 1940, mohair imports for consumption totaled only about 76,000 pounds. In the calendar year 1939 imports totaled 173,000 pounds and in 1938 they were 106,000 pounds.

Outlook for Poultry and Eggs

PROSPECTS for smaller supplies of poultry and eggs and stronger consumer demand indicate that prices of chickens, eggs, and turkeys will average higher in the first half of 1941 than in 1940. Supplies of eggs during this period probably will be 3 to 4 percent smaller than in the first half of 1940 and supplies of chickens about 5 percent smaller. Supplies of chickens and eggs in the last half of 1941 may be larger than in the like period of 1940. Supplies of turkey meat for the year ending September 1941 may be slightly larger than a year earlier.

With the exception of corn, prices of most feeds used in poultry rations in the coming season will be about the same as or lower than they were a year earlier. The price of corn may be higher, thus the total cost of poultry rations may be about the same as in the 1939-40 season. However, as a result of the expected higher egg prices, the number of dozens of eggs required to buy 100 pounds of poultry ration during the remainder of 1940 and the first half of 1941 may average smaller than in the same periods a year earlier. Individual producers may be able to reduce the costs of poultry rations by substituting some lower priced grains for corn. Other costs of producing poultry products are expected to be about the same in 1941 as in 1940.

Because of the more favorable feed-egg ratio in prospect for the first half of 1941 than in the first half of 1940, the hatch of chicks in 1941 is expected to be larger than in 1940. This may mark the upturn of another 3-year cycle of chick production.

EGG production during the first 8 months of 1940 was about 1.5 percent larger than in the corresponding months of 1939, the increased number of hens on hand more than offsetting the slightly lower rate of lay per hen. Total egg production for

1940 is expected to be the largest since 1931. As a result of the smaller hatch this year than last, the number of hens on farms in January 1941, may be 3 to 8 percent smaller than in January 1940. The rate of lay during 1941 is expected to be about the same as in 1940, since the effects of the more favorable feed-egg ratio may be at least partly offset by the smaller proportion of pullets in laying flocks. Thus total egg production during the first half of 1941 is expected to be smaller than in the first half of 1940. However, because of the expected larger hatch in 1941, total egg production in the last few months of that year may be larger than in the last few months of 1940.

Storage stocks of shell and frozen eggs in the United States on August 1, the peak for 1940, were about 9 percent larger than a year earlier. Most of the increase over August 1, 1939, however, was accounted for by holdings of the Surplus Marketing Association, which will be used for school lunch programs and other relief purposes. Thus private holdings of storage eggs were about the same as those of a year earlier.

BECAUSE of the smaller hatch in 1940 and the smaller number of layers now on hand, farm marketings of chickens (including fowl) are expected to decline relative to marketings of a year earlier, and to average smaller during the remainder of 1940 and the first half of 1941 than in the corresponding periods in 1939-40. Marketings of poultry during the last half of 1941, however, probably will tend to be larger than during the last half of 1940.

Storage stocks of chickens on September 1, 1940, were about 12 percent larger than on September 1, 1939, with most of the increase accounted for by the 61 percent larger stocks of fowl; stocks of young chickens were 25 percent smaller. The into-storage

movement during the remainder of 1940 will tend to be smaller than in the closing months of 1939. Total storage stocks at the end of the year, however, probably will be considerably larger than the 1929-38 average, although smaller than those of a year earlier, and will consist of a larger proportion of fowl than at the end of 1939.

PRESENT indications are that production of turkeys in 1940 will be about 1 percent larger than in 1939. Net returns to growers over production costs may be smaller this year than last since feed costs during most of the growing season in 1940 were higher than a year earlier and turkey prices this fall and winter may be about the same or slightly lower than a year earlier. The outcome of this year's operations will have an important influence on next year's turkey production.

Storage stocks of turkeys on February 1, 1940, were the largest on record and were 25 million pounds or 160 percent larger than the previous record high stocks for the month in 1937. Stocks were reduced by about 44 million pounds between February 1

and September 1 of this year compared with 18 million pounds during the corresponding months of 1939 but stocks on the latter date were still about twice those of a year earlier and were the largest on record. The effects on prices of the larger holdings this year probably will be small, however, since the September 1 holdings were equivalent to only about 4 percent of the total 1939 production.

Prices of turkeys were relatively high in the fall of 1939 but dropped off sharply in the latter part of December and remained low through the spring of 1941. Consequently, the season was relatively unprofitable for storage operations, and storage demand this fall may not be as strong as last fall. However, largely because of increased consumers' incomes this year, it is expected that prices will average about the same or slightly lower than a year earlier during the fall and early winter months. During the spring of 1941 prices may average somewhat higher than in the spring of 1940 since it is expected that consumer incomes will be well maintained at least during the first half of 1941.

Farm Storage in the Ever-Normal Granary

THE farmers of the United States placed about 450 million bushels of corn and about 33 million bushels of wheat in storage on their farms under loans made in connection with the 1939 A. A. A. Farm Program. The storage of these Ever-Normal Granary supplies, probably the largest ever carried over from one crop season to the next, has tested on a broad scale the practicality of farm storage under a variety of conditions.

Corn of the last three crops was kept in excellent condition, although it was subjected to abnormal heat and

moisture conditions. The farm-stored wheat was carried through one of the most severe weevil infestations on record. Practically all of the wheat stored was redeemed by farmers at a profit, and many corn farmers are extending their loans for either 1 or 2 years.

CORN: On last March 31, Corn Belt farmers had about 450 million bushels of corn in farm storage. More than 300 million bushels were 1939 corn; the rest was of the 1937 and 1938 crops.

As of August 1, only a little more than 1 percent of that farm-stored corn graded less than No. 3, the minimum grade at which it was accepted for sealing and the minimum which is acceptable in full settlement of loans if delivered to the Commodity Credit Corporation. Only about one-tenth of 1 percent—less than 600 of 450,000 loans—were called because of damage or threatened damage.

About 60 million bushels of corn which farmers delivered in settlement of loans was placed in Government-owned steel bins at country points last fall and early winter. Some of that corn has since been sold for export and a small amount has been sold to farmers for feeding, but most of it remains in the bins today.

Of the steel bin-stored corn, some of it 3 years old, 97½ percent graded No. 3 or better on August 1, and only four-tenths of 1 percent had been removed from bins because of damage or threatened damage.

In appraising farm storage of corn during the past season, it should be kept in mind that:

(1) All of the corn in the Ever-Normal Granary was of unusually high quality. Yields were high in 1937, 1938, and 1939. Wide use of hybrid seed corn led to great uniformity. Frosts were late enough to permit full maturity. American farmers probably never produced a higher percentage of No. 1 corn than they did in 1939.

(2) Weather during the storage period tested storage facilities to the limit. Winter snowfall and spring rainfall were above normal over almost the entire Corn Belt. Summer heat was generally above normal. Some areas had severe infestations of Angoumois moth, which preys on stored grain.

Proper supervision of farm-stored grain is essential for a successful Ever-Normal Granary. For the corn loans this supervision was provided by county A. A. A. committees and corn sealers appointed by them. In every

county in the commercial corn area there is one or more corn sealers. These men inspect storage space and grain before loans are made and they continue to make inspections through the loan period. Before any loan is made on farm-stored corn, the crib or bin is inspected to assure that it is weathertight and secure against serious damage from rats or other pests. No loans are made on corn grading less than No. 3. Maximum moisture content permitted varies with areas and with types of storage structures, as recommended by the Bureau of Agricultural Chemistry and Engineering.

Damage in some cases has been caused by Angoumois moth and similar pests. This was particularly true last winter and spring, when the damage from these sources was the heaviest on record in some Southern and Southwestern States. In nearly every case, however, inspection revealed these infestations sufficiently early for the bins to be fumigated and the stored grain to be reconditioned. Where it was not possible to retain the grain in storage, the farmer redeemed his corn, usually without loss, since the grain was still marketable.

Moth damage to corn was confined largely to the southern portion of the Corn Belt—in southern Illinois and Missouri and in Kentucky and Kansas, where less corn is grown than in the northern areas.

A large amount of 1938 and 1939 corn remains under loan and will be resealed for 1 or 2 years. Experience to date indicates that good quality corn can be stored on farms and kept in good condition for several years, so long as it is properly supervised.

WHEAT: About 33 million bushels of 1939 wheat were stored on farms in the fall of 1939 and kept there through the spring of 1940. Of this, about 10 million bushels in the northern wheat States were resealed to be held for another year. Less wheat than corn was stored on farms,

because fewer wheat farms have farm storage facilities and wheat, unlike corn, is not normally used in great quantity on farms. Between the time the wheat was placed under loan and the end of the loan period wheat prices went up. The loan enabled farmers to take advantage of the rise in price and to sell their wheat at a profit.

Loan wheat went through the storage period in excellent condition, despite the most serious infestation of grain weevil on record. In 21 western and midwestern wheat States, there were 33,643 loans on farm-stored wheat, covering approximately 65,000 bins. An inspection report compiled following the loan expiration on April 30 showed that¹ only 1,281 bins, or less than 2 percent, were weevily. Damage from other causes was negligible. Most of the weevily bins were treated and brought back into good condition. The rest of the loans were voluntarily redeemed by the borrowers following the inspection

reports. This involved no loss to the farmers, since the inspection revealed the threat to the wheat before enough damage was done to affect its market value. Most of the resealed wheat was reinspected in August and found in uniformly good condition.

Before a loan is made, wheat must have been in storage for at least 30 days, to reveal any deterioration that may have taken place immediately after harvest. Then both the bin and the wheat are inspected to insure that they meet specified standards. After the loan is made the wheat is protected further by frequent inspections. When a loan is made the farmer accepts responsibility for keeping the grain in condition. The experience with loans to date indicates that farmers are faithful to this responsibility and that farm storage in Ever-Normal Granary is safe and practical.

R. M. EVANS,
A. A. A. Administrator.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	Septem- ber average, 1909-13	Septem- ber 1939	August 1940	Septem- ber 1940	Parity price, Septem- ber 1940
Cotton, lb.....	cents 12.4	12.2	9.13	9.23	9.23	15.75
Corn, bu.....	64.2	69.6	56.2	63.1	61.9	81.5
Wheat, bu.....	do 88.4	87.7	72.7	0.1	62.6	112.3
Hay, ton.....	dollars 11.87	11.39	7.17	67.10	6.98	15.07
Potatoes, bu.....	cents 69.7	74.4	69.4	68.0	59.5	86.5
Oats, bu.....	do 39.9	38.8	31.5	26.7	27.0	50.7
Soybeans, bu.....	dollars (1)	73	73	67	69	1.73
Peanuts, lb.....	cents 4.8	4.7	3.44	3.44	3.38	6.1
Apples, bu.....	dollars .96	.71	.63	.79	.76	1.22
Beef cattle, cwt.....	do 5.21	5.09	7.07	7.21	7.49	6.62
Hogs, cwt.....	do 7.22	7.49	7.06	5.83	6.14	9.17
Chickens, lb.....	cents 11.4	11.6	13.6	13.4	13.7	14.5
Eggs, doz.....	do 21.5	20.5	20.6	17.2	21.0	29.7
Butterfat, lb.....	do 26.3	25.8	24.7	26.7	27.1	32.3
Wool, lb.....	do 18.3	18.6	24.3	27.3	28.0	23.2
Veal calves, cwt.....	dollars 6.75	6.78	8.92	8.59	9.06	8.57
Lambs, cwt.....	do 5.87	5.47	7.57	7.52	7.59	7.45
Horses, each.....	do 136.60	136.10	79.90	72.50	72.60	173.50

¹ Prices not available.

² Post-war base.

³ Adjusted for seasonality.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1923- 25=100) ¹	Income of industrial workers (1924- 29=100) ¹	Cost of living (1924- 29=100) ²	(1910-14=100)					Farm wages	Taxes ⁶
				Wholesale prices of all commod- ities ⁴	Prices paid by farmers for commodities used in ⁵ —					
					Living	Pro- duc- tion	Living and pro- duction			
1925	104	98	101	151	164	147	157	176	270	
1926	108	102	102	146	162	146	155	179	271	
1927	106	100	100	139	159	145	153	179	277	
1928	111	100	99	141	160	148	155	179	279	
1929	119	107	99	139	158	147	153	180	281	
1930	96	88	96	126	148	140	145	167	277	
1931	81	67	88	107	126	122	124	130	253	
1932	64	46	79	95	108	107	107	96	219	
1933	76	48	76	96	109	108	109	85	187	
1934	79	61	78	109	122	125	123	95	178	
1935	90	69	80	117	124	126	125	103	180	
1936	105	80	81	118	122	126	124	111	182	
1937	110	94	84	126	128	135	130	126	187	
1938	86	73	82	115	122	124	122	124	186	
1939	105	83	82	113	120	122	121	124	.....
September	111	86	82	115	122	123	122	.....	.....
October	121	91	82	116	.....	.....	122	126	.....
November	124	93	82	116	.....	.....	122	.....	.....
December	128	93	82	116	121	123	122	.....	.....
1940—January	119	93	82	116	.....	.....	122	119	.....
February	109	89	82	115	.....	.....	122	.....	.....
March	104	87	82	114	121	125	123	.....	.....
April	102	86	82	115	.....	.....	123	124	.....
May	106	87	82	114	.....	.....	123	.....	.....
June	114	89	83	113	121	125	123	.....	.....
July	117	91	83	113	.....	.....	122	129	.....
August	123	94	92	113	.....	.....	122	.....	.....
September ⁷	.....	.....	.....	.....	.....	.....	122	.....	.....

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	153	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1939—September	83	76	73	117	117	107	102	98	80
October	77	74	73	128	112	112	108	97	80
November	79	75	66	123	107	117	117	97	80
December	87	82	65	96	101	118	97	96	79
1940—January	90	85	66	117	103	119	91	99	81
February	91	85	76	168	101	118	96	101	83
March	92	85	73	128	102	114	83	97	79
April	96	85	81	145	104	110	82	98	80
May	92	83	88	133	108	106	84	98	80
June	83	81	104	134	103	104	81	95	77
July	78	80	89	98	110	105	88	95	78
August	76	77	79	112	110	109	90	96	79
September	77	76	73	118	114	111	104	97	80

¹ Federal Reserve Board, adjusted for seasonal variation. ² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1923=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real-estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914. ⁷ Preliminary.

NOTE: The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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FARMERS bring to a close another year of abundant production. Prices are averaging a little higher than at the outbreak of the European War, cash farm income for 1940—estimated at approximately 9 billion dollars—is the second largest since 1929. * * * Domestic demand for farm products continues good, and is expected to increase in 1941. In best position are farmers producing chiefly for the domestic market. Exports continue to decline as continental European markets have been cut off by war blockades. United States exports of farm products will continue to be small through 1941. * * * Plans for 1941 farm production are now being made, with prospects that the output of agricultural products will be about the same as in 1940. Favorable price and income outlook for 1941 is contingent upon maintenance of current agricultural adjustments by farmers in order to obtain maximum benefits from increased domestic demand. Supplies of food, feed, and fibers are fully adequate for current needs plus carry-overs.

Commodity Reviews

DOMESTIC DEMAND: Good

PURCHASING power of consumers in the United States has increased materially since last spring, and is now somewhat greater than during the business boomlet which followed the outbreak of European War in September a year ago. Industrial activity now is about 15 percent above the April low. Income of industrial workers is up about 10 percent, although only about 1 percent above income in the autumn of 1939.

Industrial output has reached such a high level that further gains will be much more difficult of attainment. Steel output already is near capacity, and some other important industries are operating around the highest levels in their history. For some of these industries capacity is being increased, but this is a relatively slow process. Industrial activity, therefore, may be expected to fluctuate for some time about present levels.

The general business prospect for the next few years continues to favor a relatively high level of consumer purchasing power and demand for farm products.—F. L. THOMSEN.

EXPORT DEMAND: Poor

Exports of farm products continue to decrease. Losses to continental Europe have been especially severe, due to the British blockade. The United Kingdom continues to take a larger volume of United States farm products than any other country, but much smaller than before the European War. Canada now is the second best export market, and is taking more agricultural products than in 1939.

Important products unfavorably affected by the export situation include cotton, tobacco, wheat, pork products, fruits, soybeans, and feed-stuffs. Dairy products and dried

beans are in a relatively favorable position but do not bulk large in total volume of exports. So long as the European War continues, total exports of farm products are not likely to show any substantial improvement.—P. H. BOLLINGER.

PRODUCTION: Increased

October crop report increased 1940 production estimates for corn, wheat, oats, grain sorghums, hay, peanuts, potatoes, tobacco, sugar beets, apples, pecans; reduced estimates for rice, beans, soybeans. Crop Reporting Board said: "Though the acreage of field and vegetable crops harvested is expected to be about 7 percent less than the average prior to recent droughts . . . yields per acre are expected to be higher than in any past year except 1937. Aggregate crop production is expected to be about 5.6 percent above the pre-drought average . . . and 1.6 percent above production last year."

Production of feed grains this season was reported "large enough to feed livestock on hand at a normal rate per head without drawing on reserves . . . Production of the principal food crops in 1940 appears to be quite generally above average. Most are above average in proportion to population . . . The fruit crop is big, even on a per capita basis, and, with exports restricted, the supply available for domestic consumption will be large . . . Commercial apple production is 5 percent below average . . . Citrus production may be the largest on record."

PRICES: Up

A 2-point rise in the average of prices of farm products during the past month raised the Government index to 99. The 5 years 1910-14 equals 100.

Index in October last year was 97. Highest for this year to date was 101 last February. Average of prices declined to 95 in June—low point for the year—then advanced. BAE looks for further advance this winter through 1941, due to improved consumer buying power.

A number of farm products have been selling higher this fall than last.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1939			
October.....	97	122	80
November.....	97	122	80
December.....	96	122	79
1940			
January.....	99	122	81
February.....	101	122	83
March.....	97	123	79
April.....	98	123	80
May.....	98	123	80
June.....	95	123	77
July.....	95	122	78
August.....	96	122	79
September.....	97	122	80
October.....	99	122	81

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	October 1909-13	October 1939	September 1940	October 1940	Parity price October 1940
Cotton, lb.....	12.4	12.1	8.73	9.23	9.35	15.75
Corn, bu.....	64.2	64.8	47.6	61.9	59.4	81.5
Wheat, bu.....	88.4	88.1	70.3	62.6	68.2	112.3
Hay, ton.....	11.87	11.49	7.31	6.98	6.99	15.07
Potatoes, bu.....	69.7	65.0	66.4	59.5	52.0	86.5
Oats, bu.....	39.9	38.4	30.3	27.0	28.3	50.7
Soybeans, bu. ⁵	(¹)	(¹)	.73	.69	.67	1.73
Peanuts, lb.....	4.8	4.6	3.36	3.38	3.26	6.10
Apples, bu.....	.96	.72	1.58	.76	.72	1.22
Beef cattle, cwt.....	5.21	5.09	6.97	7.49	7.50	6.62
Hogs, cwt.....	7.22	7.37	6.52	6.14	5.83	9.17
Chickens, lb.....	11.4	11.5	12.7	13.7	13.8	14.5
Eggs, doz.....	21.5	23.8	22.9	21.0	23.7	33.9
Butterfat, lb.....	26.8	26.8	26.9	27.1	28.8	33.7
Wool, lb.....	18.3	18.5	28.7	28.0	29.9	23.2
Veal calves, cwt.....	6.75	6.80	8.88	9.06	9.11	8.57
Lambs, cwt.....	5.87	5.35	7.60	7.59	7.64	7.45
Horses, each.....	136.60	134.60	78.60	72.60	71.00	173.50

¹ Prices not available. ² Adjusted for seasonality. ³ Revised. ⁴ Post-war base. ⁵ Soybeans for seed.

These are shown in the accompanying table. Outstanding has been the high level of prices of beef cattle, with fed steers selling for best prices in 3 years. Significant gains were recorded for wheat, dairy products, citrus fruits, and wool. Prices of practically all farm products except hogs and chickens averaged higher in the first 10 months of this year compared with last.

INCOME: Increase

Farm cash income is declining seasonally, but the total compares favorably with 1939 figures. Total from marketings and Government payments during the first 9 months of this year was 6,175 million dollars, compared with 5,791 million in the like period of 1939. Income in the last quarter of the year may be slightly larger than in the fourth quarter of 1939. Total for the full year is tentatively estimated at 9.0 billion dollars, compared with 8.5 billion in 1939.

Most of the increase in the first 9 months of this year compared with last was in larger returns from grains, dairy products, and meat animals. The only major group of commodities

showing a decline was cotton and cottonseed, but much of this was due to delayed marketings in September. Increases from cotton and cottonseed in October and November are expected to raise the total for these commodities above the 1939 figures.

The following table gives totals for the last month of record, and cumulative figures for the first 9 months, with comparisons:

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
September:			
1940.....	839	55	894
1939.....	835	66	901
1938.....	769	27	796
1937.....	940	5	945
January-September:			
1940.....	5,633	542	6,175
1939.....	5,233	558	5,791
1938.....	5,273	333	5,606
1937.....	6,106	351	6,457

WHEAT: Supply

Domestic and world wheat-supply estimates were revised only slightly in October, large quantities of wheat continued to go into United States Government loan holdings, and domestic prices continued to advance independently of prices in other countries. Wheat supplies in the United States were estimated at 1,076 million bushels for the year beginning July 1940, or 69 million bushels more than in the preceding year. Domestic disappearance including exports may total little more than 700 million bushels, leaving about 375 million for carry-over on July 1 next.

BAE says that large world wheat supplies and low export prices will continue during the 1941-42 season, unless world acreage is materially smaller than is now expected, or world yields per acre are small. Wheat prices in the United States, however, are expected to remain independent, to a considerable extent, of prices in other countries. Indications are that

the acreage seeded to wheat for harvest in 1941 in the United States will be about the same as in 1940. Prices advanced in October due to the limited supply of wheat in commercial channels.

COTTON: Consumption

Prospects continue that United States mill consumption of cotton will set a new high record during the current season. Total is expected to materially exceed 8 million bales under the stimulus of large United States Government purchases of cotton textiles and the prospective high level of industrial production and increased employment and pay-rolls. But reduced consumption in foreign countries will more than offset the increase in the United States. Exports from the United States this season likely will be between 1 million and 2 million bales.

World consumption of American and foreign cotton may be the smallest since the early 1930's. World carry-over on August 1 next is likely to be the largest on record—23 million bales or more. The 1941 world carry-over of American cotton may approach or even exceed the 1939 peak of more than 14 million bales. All but about 1 million bales or less of the American cotton carried over is likely to be in the United States and most of it owned or held as collateral by the United States Government.

Cotton prices in the United States in late October were slightly higher than in October last year, supported by Government loans.

FEED GRAINS: Record

Supply of feed grains per animal on farms is the largest on record. Total supply of corn—1940 crop plus carry-over on October 1—is 3,053 million bushels, compared with 3,202 million in 1939. Other feed grains are in larger supply this year than last. Total supply of all feed grains is smaller, but there are fewer grain-consuming animals on farms. Feed

prices are being supported by the Government corn loan program.

BAE says that prices of feed grains may continue high relative to livestock prices during most of 1941, but that the relationship may tend to become more favorable to livestock feeders as the year advances. The carry-over of corn next October 1 will probably be near the record carry-over of this year. Exports of feed grains during 1940-41 will be practically nil.

CATTLE: On Feed

Estimates of numbers of cattle on feed were increased in October. The number fed for market during the winter and spring of 1940-41 may be about the same as a year earlier. Shipments of stocker and feeder cattle into the Corn Belt States west of the Mississippi River from July through September were larger than a year earlier, while shipments into the Eastern Corn Belt were smaller. Some decrease in cattle feeding is expected in the Rocky Mountain States this year, but an increase in Texas and Oklahoma.

Market records indicate that shipments of feeder cattle to the Corn Belt in recent months consisted of a larger proportion of light weight feeders than a year earlier. This may result in smaller marketings of grain-fed cattle in the first half of 1941 than in the first half of 1940. BAE says that in this event, the seasonal decline in prices of grain fed cattle this winter and next spring may be less than usual; adds that in view of prospective substantial improvement in consumer demand for meats, the general level of cattle prices in 1941 is expected to be higher than in 1940.

HOGS: Production

The pig crop (spring and fall combined) was about 10 percent smaller this year than last. Ratio of hog prices to corn prices is a little higher than at this time last year, but probably will continue unfavorable for hog

producers. This suggests a moderate reduction in the 1941 spring pig crop. Hog production probably will not increase before the last half of 1941. Marketings during the 1941-42 season may not be much different than during 1940-41.

Slaughter supplies of hogs in the 1940-41 hog marketing year which began on October 1 will be substantially smaller than the large supply marketed in 1939-40. The number of hogs slaughtered under Federal inspection during this period is expected to total about 43 million head. This would be a decrease of about 10 percent from the 47.6 million slaughtered in 1939-40. Except for last year, however, the slaughter will be the largest since 1933-34.

BAE looks for a "materially higher" level of hog prices in 1940-41 compared with 1939-40. This is based upon prospects for a substantial reduction in hog supplies, and further improvement in domestic consumer demand for meats. A seasonal decline in prices is expected this fall and winter as marketings increase, but not to the low levels of last winter. No improvement in export demand for pork and lard is expected this season.

LAMBS: Supply

Slaughter supplies of sheep and lambs will be about the same during the fed-lamb marketing season—December through April—this year as last. But prices are expected to average higher on account of a stronger consumer demand for meats and higher prices for wool and pelts. AMS reported in October that shipments of feeder lambs and sheep into the Corn Belt States from July through September had been about as large as the unusually heavy shipments during the like period last year.

Reports indicated heavy feeding in the Western States this season, a decrease in the Rocky Mountain States, an increase in the area west of the Continental Divide, and "con-

siderable increases" in Texas and Oklahoma. Wheat pastures in Kansas, Oklahoma, and eastern Colorado were reported as having made excellent growth this fall, and a heavy movement of lambs from Texas and other western sheep States was expected.

WOOL: Consumption Up

Strengthening influence on domestic wool prices is the relatively high level of mill consumption. Supply of wool in all positions in the United States on September 1 was about 450 million pounds, grease basis. Supply was larger than at same time last year, but small in relation to probable domestic consumption during the next few months. Imports probably will be larger this fall and winter than last.

Apparel wool import requirements in current season may be chiefly for the finer grades, due to large use of such grades in materials for Army use. Australia and South Africa are leading fine wool-producing countries, although a considerable quantity of fine wool is available in South America. South American wool markets opened in late September.

The quantities of Australian and South African wool released for export and the prices fixed for such wools by the British Government will be important factors affecting prices of fine wools in this country in the next few months. BAE says it seems probable that considerable quantities of Australian and South African wool will be available for export to the United States.

FATS, OILS: Low Priced

Practically all fats and oils except butter are selling lower than at this time last year. This situation reflects the record large output of tallow, greases, and soybean oil this year, the large supplies of lard available for domestic consumption as the result of the loss of export markets, and the existence of large supplies of low-priced vegetable oils in the Philippines,

Netherlands East Indies, and other surplus-producing areas cut off from European markets.

Domestic crushings of soybeans in the 1940-41 season will be about 5 percent larger than in 1939-40, even though production of soybeans is about 6 million bushels smaller this year than last. The increase in crushings will be due to the cutting off of exports of beans to continental Europe. About 11 million bushels of soybeans, representing 13 percent of the domestic crop, were exported last season.

BAE forecasts a stronger domestic demand for all fats and oils in 1941. Decreases in production of lard and grease are indicated, but increases in production of cottonseed oil, soybean oil, and peanut oil. Production of peanuts is the largest on record, but the effect of this upon prices will be relieved by an expansion in the Government program for diverting peanuts to crushing mills and by improved demand for peanut products.

DAIRY: Prices Up

Prices of dairy products are rising seasonally notwithstanding unusually heavy production of milk for this time of year. Milk production has been setting new monthly high records, due to increased production per cow and the larger number of cows. Principal factor inducing higher prices is the increase in consumer buying power as industrial production expands for national defense. BAE looks for a higher average of prices of dairy products this winter than last.

BAE says that prospects are for larger production of each of the manufactured dairy products during the period October-April 1940-41 than in the like period of 1939-40, but that reduced imports of cheese and increased exports of dairy products—particularly of canned milk—will offset somewhat the effect of the larger production. This suggests that the increase in supplies available for domestic consumption will not be as great as the increase in production.

FRUITS: Big Supply

Smaller crops of deciduous fruits and larger crops of citrus—this year compared with last—were indicated by October crop reports. The commercial crop of apples was indicated at 115 million bushels, compared with 143 million in 1939, and with 122 million average for the 10 years 1929-38. The combined production of oranges and grapefruit from July to June 1940-41 was estimated at 4,941 thousand tons, or 18 percent more than in 1939-40.

Domestic consumption of fruits is larger this season than last, but not large enough to offset the loss of export markets. Government has instituted programs for handling the surplus.

* * * Citrus production continues to increase as more trees come into bearing, and the commercial production of apples has not been affected much by the removal of trees in home orchards. Probabilities are that total production of fruit will be larger next year.

TRUCK CROPS: Increase

October reports indicated a 5-percent increase in acreage planted or to be planted to 10 truck crops for fall and winter harvest this season compared with last. The increase over the 1930-39 average is about 25 percent. Increases were indicated for new crop snap beans, cabbage, carrots, cauliflower, kale, and spinach; decreases for artichokes, celery, and peppers. Total acreage of asparagus indicated to be available for all purposes in 1941 is about 1 percent larger than that harvested in 1940, and 19 percent larger than the 1930-39 average.

Total plantings of truck crops probably will be increased slightly in 1941 compared with 1940. Increases are most likely in important truck crops except lima beans, cabbage, cauliflower, celery, and watermelons. Because of the relatively high prices received in 1940 for many of the early truck crops, it is likely

that the acreage of many of these will be increased substantially. BAE looks for an advance in the general level of truck crop prices next year.

POTATOES: Increase

Production estimates on late potatoes were increased to 305 million bushels in October, compared with 290 million harvested in the 30 late States last year, and with 296 million average for 1929-38. Market prices were substantially lower than in 1939, but are improving now. Potato acreage probably will be increased next year, but the total crop would be smaller than in 1940 if yields average the same as in the last 4 years.

A slight increase in plantings of sweetpotatoes also is in prospect for 1941. The 1940 crop was the smallest since 1936. (Ordinarily the sweetpotato acreage in the South varies inversely with the price of cotton of the previous season, and in the commercial areas directly with the price of sweetpotatoes of the previous season. Acreage in the South next year will be about the same as in 1940, but in the commercial areas an increase is suggested by the higher level of prices this season.)

TURKEYS: Record Supply

BAE sums up the turkey situation, says that supplies of turkey meat may be slightly larger this fall and winter than last. There was an increase of 1 percent in the number of turkeys raised this year, a slightly heavier average weight per bird, and a larger storage stock at the beginning of this season. But the effect of these larger supplies on prices may be partly offset by the effects of larger consumer incomes and smaller supplies of chicken and pork.

An additional favorable factor is that consumers now eat turkey practically the year around. Between February 1 and October 1 about 50 million pounds of turkey moved out of storage into consumption, as compared

with only 18 million pounds in 1939. The average price per pound received by farmers for the major part of the 1940 crop of turkeys is expected to be about the same as or somewhat lower than the average received for most of the 1939 production. Turkey prices in early 1941 may be higher than a year earlier.

CRANBERRIES: Less

The 1940 crop of cranberries was placed at 571,300 barrels in October reports, compared with 704,100 barrels in 1939, with 580,390 barrels average for the 10 years 1929-38. The Massachusetts crop is nearly one-third smaller than in 1939, and well below average. Berries were reported as running small to medium in size but of good keeping quality. Production in Wisconsin is larger this year than last; the figures for Washington and Oregon are larger;

in New Jersey the crop is the same as in 1939.

NUTS: Reduction

Smaller crops of almonds, walnuts, filberts, and improved varieties of pecans were indicated by October crop reports this year compared with last. Production of improved pecans was estimated at 19 million pounds compared with 21 million in 1939; California almonds at 11 thousand tons compared with 19 thousand last year; California and Oregon walnuts at 50 thousand tons with 59 thousand last year; Oregon and Washington filberts 3.2 thousand tons with 3.7 thousand last year. Production of wild or seedling varieties of pecans was indicated at 63 million pounds, compared with 42 million last year. Prices of nuts will probably average higher this season than last.

—FRANK GEORGE

United States: Exports and Imports of Specified Agricultural Commodities, September-August 1938-39 and 1939-40, and September 1939 and 1940¹

Commodities	Unit	September-August		September	
		1938-39	1939-40	1939	1940
<i>Exports</i>					
Pork:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Cured pork ¹	Lb.-----	76, 072	45, 673	4, 449	1, 162
Other pork ²	Lb.-----	46, 103	74, 827	4, 707	2, 736
Total pork	Lb.-----	122, 175	120, 500	9, 155	3, 898
Lard, including neutral	Lb.-----	263, 932	247, 037	24, 693	9, 956
Wheat, including flour	Bu.-----	107, 555	44, 731	5, 675	3, 044
Apples, fresh ³	Bu.-----	12, 035	2, 920	348	77
Pears, fresh	Bu.-----	160, 047	73, 311	14, 527	2, 618
Tobacco, leaf	Lb.-----	447, 285	301, 548	44, 246	6, 394
Cotton, excluding linters (500 pounds)	Bale.-----	3, 527	6, 374	692	97
<i>Imports</i>					
Cattle	No.-----	740	623	20	30
Beef, canned, incl. corned	Lb.-----	83, 132	76, 055	13, 055	4, 016
Hides and skins ⁴	Lb.-----	296, 965	331, 565	24, 117	28, 012
Barley malt	Lb.-----	108, 516	61, 279	7, 064	2, 497
Sugar, cane (2,000 pounds)	Ton.-----	2, 618	3, 238	415	200
Flaxseed	Bu.-----	19, 164	11, 866	452	24
Tobacco, leaf	Lb.-----	60, 681	64, 632	5, 214	5, 500
Wool, excluding free in bond for use in carpets, etc	Lb.-----	69, 471	171, 329	11, 944	15, 357

¹ Corrected to Oct. 25, 1940.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled or salted, and canned pork.

⁴ Includes baskets, boxes, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records, Bureau of Foreign and Domestic Commerce.

This Changing Agricultural World

V: Fats and Oils

PERHAPS the most significant development in the world fats-and-oils situation during the past 20 years has been the rapid increase in the production and consumption of vegetable oils and whale oil. Since the World War of 1914-18, the demand for fats, particularly the hard fats suitable for edible products and for soap, has expanded on a world-wide scale. Although livestock and dairy industries, which formerly supplied the major part of the world's fat requirements, have increased since 1918, the increase in this direction has not been sufficient to meet the new demands. Vegetable oil-seed and oil-nut production, and whale-oil production, on the other hand, have been capable of great expansion at relatively low cost. This expansion has been encouraged by the extension of the process for hardening and stabilizing the liquid fats, or oils, by hydrogenation.

The process for hardening fats and oils by hydrogenation, usually accomplished by passing hydrogen through the heated fat or oil in the presence of a nickel catalyst, was discovered early in the present century. But it was not until the third and fourth decades that widespread use of the process was made. At the present time, large quantities of cottonseed oil, coconut oil, soybean oil, peanut oil, whale oil, fish oils, and several other liquid or semisolid fats are hydrogenated for use in such products as cooking compounds, soap, margarine, and candles. Frequently hardened oils, because of their relatively low cost, uniform consistency, and stability, are preferred to natural solid fats, even when such fats are abundantly available.

PART of the increase in world production of liquid fats during the past 20 years has been the indirect

result of efforts to expand production of other products. World production of cottonseed (excluding China), for example, was increased from less than 9,000 million short tons in 1918 to nearly 13,000 million tons in 1938, chiefly because of the increased cultivation of cotton in the Soviet Union, South America, colonial Africa, and other areas. In the main, however, the expansion in liquid-fat production has been accomplished chiefly by direct efforts to increase supplies of fats and oils.

World peanut production (again excluding China) was increased three-fold between 1918 and 1938, soybean production was nearly doubled, exports of coconut oil and copra from tropical areas were nearly tripled, large palm-tree plantations were established in the East Indies and West Africa, production of sunflower seed, rape seed, sesame seed, and poppy seed in Asia, Europe, and South America was increased considerably, and the harvest of wild babassu nuts in Brazil was expanded. Production of materials yielding industrial oils, such as castor beans, tung nuts, and perilla seed, also was materially expanded, mainly in response to increased world demand for such oils. Among the major oilseeds, only flaxseed and hempseed have failed to show gains in output.

WORLD production of whale oil increased more than seven-fold in 20 years, rising from 156 million pounds in the 1918-19 whaling season to 1,137 million pounds in 1938-39. The greater part of this increase occurred after 1928. Norway and the United Kingdom lead in the output of whale oil, with large modern whaling fleets sailing each year to the Antarctic and other grounds in pursuit of the large and fast blue and fin whales, as well as humpback, sperm, and sei whales. Since 1935, Japan

and Germany also have engaged in whaling activities on a large scale, although German enterprise has lately been interrupted by the war. There have been several great whaling eras in the past, but none has equaled the present in efficiency of operations and in the quantity of whale oil produced. Formerly, whale oil was used chiefly as an illuminant and a lubricant. Now, as a result of the development of the hydrogenation process, it is used mainly in the manufacture of food products and soap.

Increased world production of vegetable oils and whale oil has made possible a marked increase in the world consumption of fats per capita. It also has resulted in some shifting of the currents of world trade. This is of special importance to the United States, since with low-cost vegetable and marine oils available, many European countries have become increasingly reluctant to buy American lard, as well as beef and mutton fats, except at low prices.

THE United States for many years has been the principal lard-exporting nation, and has had an important share in world exports of beef and mutton fats, particularly oleo oil, which, with neutral lard, formerly was an important ingredient of margarine. The trend in exports of oleo oil from the United States has been downward since 1921 and the trend in lard exports has been downward since 1923. A precipitate drop in lard exports occurred in 1934 and 1935, largely because of the curtailment in domestic hog slaughter and lard production which followed the severe drought of 1934. Domestic lard production was restored to predrought levels in late 1939 and in 1940, but exports continued at a low level. The scarcity and high price of lard in European markets in the period 1935-38 tended to speed up the process of developing substitutes for it, which, in the United Kingdom, consisted largely of hardened

whale, cottonseed, and peanut oils.

Strong European tendencies toward national self-sufficiency during the last decade and, more recently, the European War have given further impetus to the substitution of low-cost vegetable and marine oils for such fats as lard and oleo oil. During the 1920's, Germany took about a third of the total lard exports from the United States. But since 1933, Germany has sought to obtain its fat requirements from an expanded domestic output and from countries with which profitable trade bargains might be made. Under the autarchic regime, German imports of lard from the United States dwindled rapidly, and at the outset of war, in September 1939, such imports had virtually disappeared. Imports of American lard by other countries on the continent of Europe have never been large; in recent months practically no lard has been imported from the United States, except by Finland.

THE United Kingdom in the past has been the most important foreign outlet for American lard. Vegetable oils and whale oil had made some inroads on the British lard market before the outbreak of war, particularly in the period of lard shortage. But it was not until the necessity for conserving dollar exchange became acute, after the outbreak of war, that the normal consumer preference for lard as a cooking fat in the United Kingdom was subordinated to the national interest, and imported lard was, to a large extent, replaced by cooking fats manufactured from hardened whale oil and vegetable oils obtained chiefly from Empire sources. If the war in Europe is of long duration, it is possible that British taste may be permanently converted to the hydrogenated cooking fats. In that case, the export market for United States lard would be confined largely to Cuba, Mexico, and Central and South America, which probably could not be counted

on to take more than about one-fifth of the usual quantity of lard available for export in this country.

IT seems probable that the world trend toward increased vegetable-oil production will be continued in the next 10 or 20 years, although the upward tendency, outside of Europe and North America, may be halted for the duration of the present war. Large surpluses of copra, palm oil, palm kernels, flaxseed, peanuts, rape seed, and other oil-bearing materials are now "backed up" in the Philippine Islands, the East Indies, Argentina, Uruguay, West Africa, and India as a result of the blockade of the important continental European market. But when that market is reopened, it is likely that the demand for fats in Europe will be so great that the surpluses available in non-European countries will be rapidly used up. Further impetus probably will then be given to increased production of vegetable oils, particularly since the production of animal fats in Europe will be curtailed for several years as a result of the reduction of livestock now under way.

It is generally believed that world production of whale oil cannot be greatly increased beyond the level of the late 1930's without seriously depleting the whale population. Hence any marked increase in output in this field probably would be followed by a declining trend in production.

THE United States for many years has produced an export surplus of lard and other animal fats and oils, although certain vegetable oils normally are imported, mainly for the purposes of adding quick-lathering properties to soap and of supplementing domestic supplies of drying oils. The loss of lard exports in recent months has seriously depressed the price structure for domestic food and soap fats, particularly those of animal origin. Hence, the regaining of former export markets for the animal fats and

oils is important to American producers. In the face of the many world political and economic uncertainties, a forecast of the course of exports in the next few years would be extremely hazardous. But on the basis of all available indications it seems fairly safe to say that over the longer period the trend in exports of animal fats and oils from the United States is likely to continue downward. World productive capacity for vegetable fats and oils is now at a high level and promises to increase further in the future.

Europe for many years has imported livestock feeds as well as fats and oils. A considerable part of the imports of feeds has been in the form of vegetable-oil-bearing materials, which when processed for oil also yield cake and meal of a high protein content—widely used for livestock feeding, particularly for dairy cattle. Oilseed crushing mills form an important part of the industrial structure of Europe. The crushing industry has grown rapidly in importance in recent years, and since the deficit of both fats and feeds in Europe is likely to become greater as the human population increases, the importation and crushing of vegetable-oil-bearing materials probably will become even more important as time goes on.—R. M. WALSH.

EMPLOYMENT: Decrease

Farm employment, declining as the 1940 harvest draws to a close, will decrease more through December. Wages this fall have been about 29 percent above the 1910-14 average, as contrasted with a farm price level slightly below average. The ratio of prices received by farmers to the wages they paid hired hands was about 75 percent of pre-World War. October farm wage rates were about 3 points higher this year than last. BAE forecasts higher farm wages in 1941 compared with 1940 as industrial production and employment expand.

Expenditures for Farm Machinery

FARM purchases of machinery and motor vehicles in the last 5 years have been about double what they were in the pre-war years 1910-14. The great increase was in the purchases of motor vehicles. Expenditures for farm machinery other than motor vehicles in the last 5 years averaged about the same as in the pre-war period. The annual purchases of automobiles increased from less than 100 million dollars to about 250 millions, motor-trucks from less than 10 million to about 45 million dollars, and tractors from an average of a little more than 10 million to about 200 million dollars.

While farm expenditures for equipment and motor vehicles were twice as great in the past 5 years as they were in the pre-war years (1910-14), the number of horses and mules on farms was reduced from 25 to 15 million head and the number of hired laborers employed was about 13 percent lower than in the pre-war years. The number of farms is about 10 percent greater, the acreage cultivated has increased, and agricultural production is materially greater than it was. Thus the increase in motor vehicles and motor power represents not only a shift from horse power but also a considerable increase in production accompanied by a decrease in the man power required on farms.

The greatest contribution of motor power has been in the direction of improving harvesting and threshing so as to deal with crops in critical periods and to make possible the handling of larger crops on farms when the harvesting time and labor are limiting factors. Comparing the censuses of 1910 and 1930, it may be observed that the crops harvested per farm in 1930 were 8 acres greater than in 1910, and the acres harvested per person were 10 greater than in 1910.

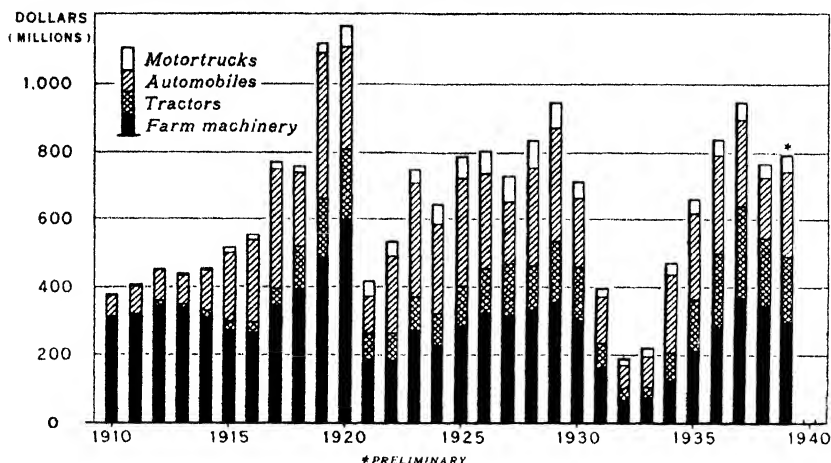
DURING most of the period since the World War the automobile has been a major item in farmers' purchases of mechanical power, with tractors second in importance. However, purchases of tractors relative to automobiles have increased steadily, and in 1937 and 1938 they exceeded purchases of automobiles. The amounts spent by farmers for motor-trucks in all years were considerably less than for automobiles or tractors and have increased much less since 1932 than the purchase of other forms of mechanical power. The increase in purchases of second-hand automobiles and trucks has been an important factor in the decreased proportion of the total outlay for machinery

Table 1.—Estimated Farmers' Purchases of Automobiles, Motortrucks, Tractors, and Other Farm Machinery, 1910-39

Year	Auto- mobiles	Motor- trucks	Trac- tors	Other farm ma- chinery	Total
	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.
1910.....	61	2	6	309	378
1911.....	82	3	8	314	407
1912.....	90	4	14	346	454
1913.....	87	4	10	341	442
1914.....	120	8	20	310	458
1915.....	207	14	28	270	519
1916.....	243	16	31	267	557
1917.....	356	19	53	344	772
1918.....	222	17	130	390	759
1919.....	428	28	179	485	1,120
1920.....	301	60	212	594	1,167
1921.....	107	42	83	186	418
1922.....	226	42	80	183	530
1923.....	338	38	97	275	748
1924.....	264	61	92	229	646
1925.....	317	66	119	287	789
1926.....	281	72	129	324	806
1927.....	188	71	155	313	727
1928.....	292	79	130	332	833
1929.....	337	77	181	355	950
1930.....	204	49	158	300	711
1931.....	134	26	76	163	399
1932.....	71	16	32	69	188
1933.....	92	26	30	74	222
1934.....	230	36	53	122	471
1935.....	252	43	153	215	663
1936.....	296	44	214	284	838
1937.....	254	51	271	375	951
1938.....	180	40	201	343	764
1939 ¹	250	51	194	298	793

¹ Preliminary.

FARMERS' PURCHASES OF AUTOMOBILES, MOTORTRUCKS, TRACTORS, AND OTHER FARM MACHINERY, UNITED STATES, 1910-39



going for these items. The number of tractors on farms, however, has continued to increase and at the beginning of 1940 was 75 percent larger than in 1930, whereas the number of automobiles and motortrucks on farms was only slightly higher in 1940 than in 1930.

THE marked increase in farmers' outlay for mechanical power equipment since 1910 is shown in the preceding table and chart. During the period 1910-14, farmers' yearly purchases of such equipment averaged 104 million dollars, which was only about 25 percent of the purchases of all types of machinery. In the years 1925-29, purchases of mechanical-power equipment averaged 499 million dollars and was 61 percent of total purchases of all machinery.

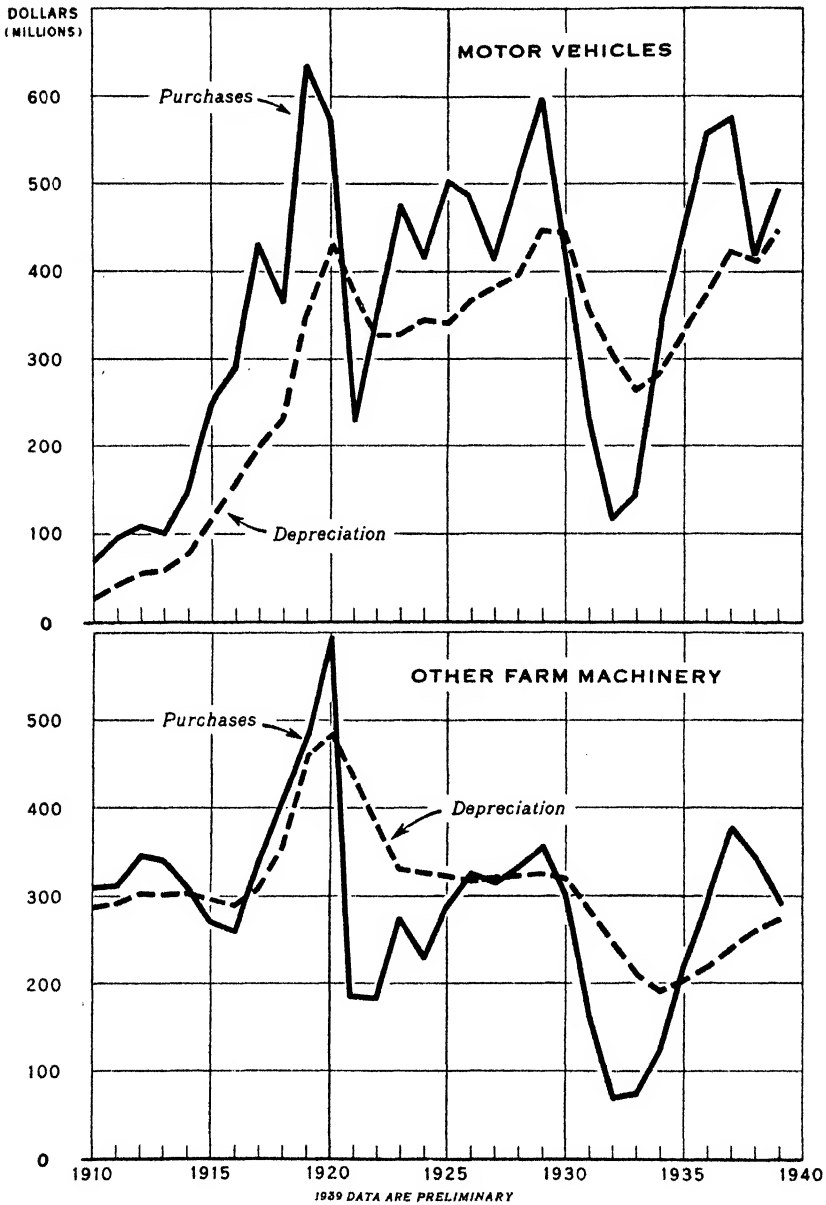
The estimates of purchases of the various types of farm machinery given in table 1 represent the net outlay of farmers as a group for all types of farm machinery. In the estimates of purchases of automobiles and motortrucks, allowance has been made for the trade-in value of vehicles. As tractors and other farm machinery are bought almost exclusively by farmers, only the purchases of new equipment are included in the esti-

mates and no adjustment was made for trade-in allowances.

Because of the durability of most farm machines and the wide variation in purchases from year to year, depreciation is probably a better measure of the cost of machinery used in a year's production of agricultural products than the actual purchases of machinery in that year. In years when farmers' income is relatively high, purchases of farm equipment tend to exceed the amount of machinery annually used up. On the other hand, in periods of depression such as 1921-22 or 1930-33, farmers' purchases are considerably less than the machinery used up in production.

THE relationship between farmers' purchases and depreciation of machinery from 1910 to 1939 is shown in the chart on page 14. During the years 1910-20, purchases were somewhat in excess of depreciation charges and farmers were adding all types of farm machinery to their existing equipment. During the period 1923-29, purchases also exceeded depreciation. This was a period when the number of automobiles, tractors, and motortrucks on farms rapidly increased. From 1930 to 1933 farmers' purchases were considerably below the estimated depre-

**FARMERS' PURCHASES AND DEPRECIATION OF MOTOR VEHICLES
AND OTHER FARM MACHINERY, UNITED STATES, 1910-39**



ciation of farm machinery. This period was accompanied by a marked decline in the number of automobiles on farms, some decline in the number of tractors and trucks, and a marked increase in the average age of machinery on farms. Since 1933 farmers

have been replenishing the equipment that was worn out during the depression years 1930-33, and purchases have been somewhat higher than depreciation charges.

O. C. STINE,
Chairman, Income Committee.

Rubber—An American Problem

THE United States is the leading consumer of rubber, taking annually about 600,000 long tons, or more than half the annual world output. Despite this great demand, no rubber is produced domestically, and only an insignificant volume comes from the tropical Americas—original source of practically all rubber. British Malaya, Netherlands Indies, and adjacent areas, 10,000 miles away, furnish over 97 percent of the world production. More than 2 months are required for a shipment of rubber to reach the United States; there is no equally important strategic raw material that is shipped so far and in such large quantities. To the extent that the economy of the United States depends on rubber, any interference with existing sources of supply might result in the most serious consequences.

PRIOR to and during the first decade of this century, wild rubber was the only variety entering international trade, as distinguished from the cultivated rubber that took its place, which is collected from trees carefully planted and tended. World production of wild rubber reached its peak of 83,000 long tons in 1910 while the output of plantation rubber was only 11,000 tons. Since more than half the wild rubber came from Brazil, it was for many years Brazil's second-ranking export, exceeded only by coffee; as a source of government revenue rubber outranked even that commodity.

The very factors that made Brazil the chief beneficiary of the rubber industry—increasing demand, limited supply, and high prices—provided a tremendous impetus for the young plantation rubber industry in the Far East and eventually resulted in the replacement of wild rubber. It is significant that the plantation rubber

industry was developed from the seeds of the wild *Hevea Braziliensis* tree of Brazil. By 1914 plantation rubber production exceeded the production of wild rubber. Shortly thereafter, wild rubber sources became unimportant. In 1939 the world's exports of rubber were estimated at 1,000,000 long tons. Brazil's share was not more than 17,000 tons, or 1.7 percent of the total; all wild rubber sources contributed only 28,000 tons, or 2.8 percent of the total export volume; plantation rubber of the Far East accounted for 97 percent.

AT the time when wild rubber was being rapidly displaced by plantation rubber the modern motor era arrived, and with it the mass production of rubber tires. Under the circumstances it was natural for United States rubber manufacturers to turn for their supplies to British Malaya, the Netherlands Indies, and some of the minor rubber-growing regions of Asia. The first two places are the principal sources of our supplies, accounting for approximately 85 to 90 percent of all rubber imports. The former is by far our most important source. Of the 499,000 tons of rubber imported into the United States in 1939, 278,000 tons, or 56 percent, came from British Malaya—nearly twice the volume (143,000 tons) from the Netherlands Indies.

Despite the continued predominance of Malayan rubber in United States imports, during the past two decades the United States has come to rely on the Netherlands Indies for an increasing volume of its rubber supply. In 1939 imports from the Netherlands Indies made up 29 percent of total American rubber imports, compared with only 13 percent in 1920. In years of high prices, such as 1925, when rubber averaged 48 cents per pound, the United States rubber bill totaled

431 million dollars; in the 5 years 1935-39 rubber averaged 15 cents per pound, and the average annual bill was 167 million dollars.

IN view of the great dependence of the United States upon rubber imported from British Malaya and the Netherlands Indies, the question arises as to the possibility of obtaining this strategic raw material elsewhere should the necessity arise. It would be relatively easy to replace at least part of the rubber shipments from the Netherlands Indies by shipment from British Malaya. An entirely different situation would result if it became necessary to replace exports from British Malaya. Such a possibility cannot be disregarded.

At present a number of measures, falling into two categories, are being adopted to meet this threat: Those dealing with an adequate supply of rubber for the present and immediate future, and those concerned with the problem of achieving ultimate independence of the Far Eastern markets. Increased purchases of crude rubber and rubber reclamation belong in the first group.

With stocks on hand totaling about 243,000 long tons (as of the end of September) and volume of rubber afloat estimated at 137,000 tons, the United States has enough rubber for more than 6 months, even if no more were imported. A small part of these stocks is included in the strategic material stocks being built up by the 87,000 tons received in barter for cotton and the 330,000 tons contracted for by the Rubber Reserve Co. organized by the Reconstruction Finance Corporation, to be delivered during the remainder of this year and during 1941. In 1939 the consumption of reclaimed rubber in this country totaled 170,000 tons or 29 percent of the crude rubber utilized in the United States. It is estimated the percentage of reclaimed to crude rubber can be considerably increased. If at the same time utilization of

rubber could be cut down in a number of nonessential products, the country's present reserves would be increased. On the whole, the period of availability of these various stocks could be materially lengthened by restrictions in use and production of rubber goods.

THESE measures offer no permanent solution of the United States rubber problem. In order to bring that about the main reliance is placed upon the cultivation of rubber in Tropical America and upon synthetic rubber production in the United States.

Synthetic rubber provides a possible source of supply to be considered in an extremity such as a blockade, but because of higher price and different characteristics its utilization is not likely to be as widespread as that of natural rubber for some time to come. Synthetic rubber resistant to heat, oil, acids, and sunlight has been produced and where these qualities are important the product commands a premium price. Rubber-like materials have been derived from a great variety of materials, such as natural gas, oil, coal, sugar, potatoes and grain, all of which are produced in abundance in the United States. The first three elements, unlike natural latex are not annually renewable but must be mined and thus tend to deplete the nation's resources to the extent that they are used. In 1939 only 1,700 tons of synthetic rubber were produced in this country, or one-fourth of 1 percent of the year's consumption. In an emergency large quantities of synthetic rubber could be utilized to supplement natural rubber in the manufacture of tires, and this would doubtless somewhat reduce the price of the artificial product.

UNDER the auspices of the Department of Agriculture work is under way to stimulate plantation rubber production in Latin America for the purposes of developing assured sources of supply and to improve trade rela-

tions with Latin American countries. Research on plantation rubber production has recently been authorized by Congress with an appropriation of \$500,000 for a 3-year period. The need for sources of rubber other than the British, Netherlands, and French colonies in the Orient was recognized some years after the World War by rubber and vehicle manufacturing companies. Vulnerability in time of war was a consideration secondary to the idea of defense against control of supplies and prices. Plantations laid out by American companies in Liberia and in Central and South America have been gradually developed. With sustained attention to technical and biological problems in which the

government will now assist there is reason to expect a rapid extension of plantings in Latin America.

Plans of the Department of Agriculture contemplate the assembling of high-yielding strains of rubber trees from plantation sources in the East and by further plant collecting in the Amazon Valley. After rigid test at central experiment stations in the American tropics the superior strains will be distributed to demonstration stations maintained cooperatively by the Department and the Latin-American governments. The demonstration stations will be centered in areas known to be suitable for rubber culture and it is expected that the commercial plantations will be established as sup-

United States: Imports of Rubber from Specified Countries, 1920, 1925, and 1930-39

Year ended Dec. 31	Country of origin				Average value per pound
	Total	Netherlands Indies	British Malaya	Other countries	
Quantity:	1,000 pounds	1,000 pounds	1,000 pounds	1,000 pounds	
1920.....	568, 245	72, 374	348, 388	147, 483	-----
1925.....	896, 948	153, 241	517, 165	226, 542	-----
1930.....	1, 092, 285	185, 743	763, 411	143, 131	-----
1931.....	1, 124, 003	157, 656	804, 152	162, 195	-----
1932.....	928, 857	159, 023	655, 619	114, 215	-----
1933.....	938, 340	168, 652	682, 378	87, 310	-----
1934.....	1, 037, 160	168, 356	786, 145	92, 659	-----
1935.....	1, 046, 408	174, 842	774, 382	97, 184	-----
1936.....	1, 093, 446	215, 225	761, 129	117, 089	-----
1937.....	1, 345, 067	343, 174	823, 411	178, 482	-----
1938.....	923, 086	246, 132	547, 934	129, 020	-----
1939.....	1, 118, 595	320, 366	622, 863	175, 366	-----
Percentage of total quantity:	Percent	Percent	Percent	Percent	
1920.....	100. 0	12. 7	61. 3	26. 0	-----
1925.....	100. 0	17. 1	57. 7	25. 2	-----
1930.....	100. 0	17. 0	69. 9	13. 1	-----
1931.....	100. 0	14. 0	71. 5	14. 5	-----
1932.....	100. 0	17. 1	70. 6	12. 3	-----
1933.....	100. 0	18. 0	72. 7	9. 3	-----
1934.....	100. 0	15. 3	75. 8	8. 9	-----
1935.....	100. 0	16. 7	74. 0	9. 3	-----
1936.....	100. 0	19. 7	69. 6	10. 7	-----
1937.....	100. 0	25. 5	61. 2	13. 3	-----
1938.....	100. 0	26. 7	59. 4	13. 9	-----
1939.....	100. 0	28. 6	55. 7	15. 7	-----
Value:	Dollars	Dollars	Dollars	Dollars	Cents
1920.....	243, 142	31, 148	153, 758	58, 236	42. 8
1925.....	431, 505	65, 639	244, 647	121, 222	48. 1
1930.....	140, 989	26, 317	97, 243	17, 429	12. 9
1931.....	73, 803	11, 142	51, 921	10, 740	6. 6
1932.....	32, 538	5, 813	22, 214	4, 511	3. 5
1933.....	45, 868	8, 546	32, 866	4, 456	4. 9
1934.....	101, 648	17, 438	74, 571	9, 639	9. 8
1935.....	119, 169	20, 668	87, 593	10, 908	11. 4
1936.....	159, 019	31, 992	110, 524	16, 503	14. 5
1937.....	248, 267	64, 709	150, 584	32, 974	18. 5
1938.....	180, 171	35, 699	75, 503	18, 969	14. 1
1939.....	178, 415	52, 125	98, 614	27, 676	15. 9

Compiled from official records of the Bureau of Foreign and Domestic Commerce and Foreign Commerce and Navigation of the United States.

plies of the improved plants are made available. It is accepted that the keystone of a self-sustaining industry capable of competition with the Orient is high-yielding disease-resistant plant material. The expectation is that with the development of such material a considerable part of the rubber industry would return to its original home in the New World.

NEITHER synthetic nor natural rubber industries can spring full-blown to meet emergencies. In both cases enormous effort intelligently directed and large investment of capital are required. Three years for industrial plant building and 10 for growth of plantations is a fair esti-

mate of the time required to supply any considerable portion of our needs from artificial and natural sources. Experts say that exclusive use of one or the other, considering their different properties, is neither essential nor desirable. In the same product—tires for example—both synthetic and natural rubber can be used to advantage. If America looks elsewhere than to present rubber sources, the prospect for the next decade is that rubber from a test tube and temporarily high-priced tires will be followed by return to the natural source in America and with it, abatement of premium prices.

W. LADEJINSKY,
*Office of Foreign
Agricultural Relations.*

New Trends in Milk Distribution

THE cost of getting milk from the producer to the consumer is fast becoming a focal point of Nation-wide attention. Dairy farmers are producing increasing quantities of milk meeting the standards set up by the health authorities in their fluid markets. At the same time many consumers are unable to buy the quantities of milk they need primarily because they cannot afford the expenditure that would be necessary at retail prices prevailing in most markets.

In general, more than 50 percent of the retail price goes to pay for services rendered by handlers after the milk is received from the producer. Assuming that the level of producer prices is in line with what is necessary to assure an adequate supply of fluid milk, then it becomes obvious that if retail prices are to be reduced distribution costs will have to be cut.

LOWERING retail prices by cutting distribution costs appears to be one of the main keys to increased fluid milk consumption. There is a definite tendency throughout the country today for milk dealers to experiment with new delivery methods, with new

types of container, and with new pricing plans, and all of these experiments are pointed toward reducing consumer prices.

Information assembled from a number of fluid-milk markets throughout the United States indicates that where consumers have been given the opportunity of buying milk at lower prices, they buy more milk. In cities where there is a wide differential between the store price of milk and the home-delivered price, consumers buy a much greater proportion of their milk supplies from the stores. Competition in the sale and distribution of milk has led individual distributors to develop various plans for reducing prices to milk consumers in order to increase their volume of business.

MILK distributors in various sections of the country have recently turned to the use of paper or fiber containers instead of glass bottles with the idea of decreasing distribution costs. Handlers have generally confined the sale of milk in paper one-quart containers to sales through stores. The stores in the main have sold this milk for the same price as milk

in quart glass bottles, except where State milk-control boards have required a charge of 1 to 2 cents per quart more for milk in the paper container.

Whether savings in cost can be made by handlers through the use of quart paper containers is a controversial question. Studies published by paper-container manufacturers show the cost of packaging and delivering milk in paper to be less than the cost of packaging and delivering milk in glass bottles. However, other studies by glass-container manufacturers show that it costs 1 cent per quart more to package and deliver milk in paper containers than in glass bottles.

It is difficult to determine, on the basis of these studies, whether the use of paper or glass containers is more economical. Probably the best guide is the operating experience of milk distributors in individual markets. Where milk has been sold at the same price per quart, both in paper containers and in glass bottles without deposit charges, it seems that consumers prefer bottled milk. However, if, as has been asserted, the use of paper containers does reduce the cost of packaging and delivery, and if the decrease in cost is passed on to the consumer in a lower price, consumers are likely to prefer the paper container.

SOME indication of consumer preference for milk in containers which make possible lower prices is found in markets where two-quart paper and glass containers are in use. The two-quart paper container introduced last November in New York City for home-delivered milk has proved popular. One reason for its popularity apparently is in the price—3 cents less than the price of 2 quarts of milk in glass bottles. A few other markets regularly use multiple-quart glass bottles, some since 1936. The reduction in the price of milk in the paper container in New York City is about in line with reductions in other markets for milk in 2-quart and gallon glass containers.

One reason for the development of this recent trend in the use of oversize containers is without doubt the savings in the cost to consumers buying milk in the larger containers. Milk in half-gallon containers costs consumers anywhere from 1 cent less per quart in Kansas City to 3.5 cents less per quart in San Diego than milk in quart bottles. Savings to consumers on milk in gallon containers range from 1 cent per quart in Omaha to 3 cents per quart in Chicago.

In Denver, where consumers save from 1 cent to 2.5 cents per quart by buying milk in one-half gallon containers and from 1.5 cents to 2.5 cents per quart by buying milk in gallon containers, there has been a shift in quantities of milk taken in the various sized containers. A comparison of sales for the first half of January 1940 with those for the first half of May 1940 shows that while single quart sales decreased, sales in one-half gallon containers increased, bringing a net increase of nearly 4 percent in the usual consumption of milk for a 2-week period. Whether such gains in sales are typical of all markets is difficult to say, but in markets where the multiple-quart bottles have been introduced at lower prices per quart, sales of fluid milk apparently have increased.

SOME handlers have preferred to adopt other means of reducing prices to consumers. One plan that has been tried successfully in several markets makes available additional quarts of milk delivered at one time at a price lower than that of the first quart. This type of pricing plan has been adopted by some handlers in the New York and Chicago markets. In New York 14.5 cents is generally charged for the first quart of milk with subsequent quarts being sold at 11.5 cents. In the Chicago market handlers usually charge 13 cents for the first quart and 8.5 cents for additional quarts taken on the same delivery.

This plan is not greatly different from the system of quantity discounts given in some markets for many years, except that it brings savings to customers buying as little as 2 quarts at one delivery. Ordinarily, quantity discounts are given to customers buying 4 quarts or more at one delivery. For example, in the Omaha and LaPorte markets, customers buying 4 or more quarts pay 1 cent per quart less for their milk. In the Battle Creek market, four-quart customers pay the wholesale price for milk which is 2 cents per quart less than the retail delivery price. In the Kalamazoo market, however, customers buying 3 quarts at one delivery are given a price reduction of 1 cent per quart, and if they buy 6 or 7 quarts at one delivery, they pay 2 cents per quart less than the regular delivery price.

THESE various plans for reducing prices of milk to consumers have placed emphasis on the purchasing of larger quantities of milk at one time. This has had two principal effects which are of primary importance to the dairy industry. The first is the increase in the consumption of fluid milk, and the second is the gradual appearance of every-other-day deliveries. The increased consumption of fluid milk improves the producers' blend, or net, price. The adoption of every-other-day deliveries reduces the cost of distribution to a certain extent, and this is one place where further economies may be expected. Although every-other-day deliveries have not been formally adopted in any market or in any geographic section of a market, reports indicate that they are gradually becoming more and more important.

Within the past few years there has been a marked improvement in the refrigerator facilities of city families and the use of mechanical refrigeration is now widespread. Because of this and the quality of milk being sold, it is no longer necessary for consumers to buy milk every day. It is now

possible to keep milk in a household refrigerator for 2 or 3 days or longer without any deterioration in quality. This is one reason why consumers shift to less frequent but larger purchases where an inducement in the form of a lower price is offered.

AN important development for the near future may be the adoption of every-other-day deliveries for whole retail systems. Such a plan would presumably make possible further savings in the cost of distributing milk. If one delivery wagon and driver could serve one route on one day and another route on alternate days, some savings could be made in investments for delivery equipment and for wages.

Further savings could probably be made if paper containers were adopted along with every-other-day deliveries. Paper containers for milk weigh less than glass bottles. Twice as much milk can be delivered in the same number of stops without increasing the amount of labor and time consumed in delivering and in keeping records. The use of the 2-quart paper container for this type of delivery is a convenience to the housewife because it takes up less space in the refrigerator. More milk can be kept on hand in a limited amount of refrigeration space than would be possible if it were delivered in glass bottles.

Besides the savings that could be made under a plan of every-other-day deliveries, there is the possibility of further reductions in the cost of distributing milk by consolidating delivery routes and eliminating some of the obvious duplication. It often has been pointed out that if all deliveries in any one city block could be made by one truck instead of by a half dozen or more, the mileage traveled by all trucks in making deliveries throughout the market would be substantially reduced, and consequently, the cost would be lowered. Interest in the problem of route duplication is no longer purely academic;

various groups are studying ways of dealing with it.

IN examining the recent developments in the milk distribution field, it is apparent that Government regulatory programs which establish minimum prices to producers encourage handlers to adopt more efficient methods of distributing and handling milk. The savings which handlers are able to make through reducing costs are, to a considerable extent, reflected in benefits both to consumers and to producers. On the other hand, where regulatory bodies establish both producer and consumer prices for milk,

it is observed that, in most instances, the policies followed have retarded the adoption of more efficient methods and practices in milk handling and distribution.

The cost of milk distribution is of direct concern to handlers, producers, and consumers. Increasing attention is being given to ways of lowering prices to consumers and encouraging increased consumption. All groups—producers, handlers, and consumers—will gain from these efforts.

E. W. GAUMNITZ,
*Assistant Administrator,
Surplus Marketing Administration.*

The Changing Composition of Farm Income

AS a by-product of a research project entitled "The Changing Balance Between Agriculture and Industry" conducted by the Bureau of Agricultural Economics and the National Bureau of Economic Research under the Bankhead-Jones research funds, there is now available a long-time record of gross income from farm production in the United States by major commodities, as well as a record of income derived from the domestic and export markets.¹ This record reveals the long-time changing relative importance of the several branches of agriculture as measured by gross income from farm production of individual commodities, and the changing relative importance of the domestic and foreign markets as sources of farm income. The data brought together here may serve as background for appraising the marked changes created by the present war in the relative importance of the domestic and foreign market as sources of farm income.

The nature of changes in the relative importance of the major branches of agriculture can be seen from the fol-

lowing data for three selected 5-year periods taken around 1870, 1910, and 1934-37. In the earliest of these periods, wheat supplied about 11 percent of total gross income; in a recent period, less than 6 percent. The respective percentages for hogs are 20 and 12, for cotton and cottonseed 13 and 10. In contrast with these declines the percentage for cattle has remained relatively stable at about 9.5. In very marked contrast are the increases in relative importance of tobacco from 1.4 percent to 3.3, fruits from about 2 to 5, and dairy and poultry products from 16 to 28.

Table 1. Percentage Contribution of Selected Farm Products to Total Gross Farm Income

	1869-73	1909-13	1934-37 ¹
	Percent	Percent	Percent
Wheat.....	11.2	7.9	5.7
Other staple foods.....	4.8	4.5	4.3
Hogs.....	20.3	13.0	12.3
Cattle.....	9.5	9.4	9.7
Sheep and lambs.....	.5	1.1	1.2
Cotton and cottonseed.....	12.6	13.4	10.4
Tobacco.....	1.4	1.7	3.3
Fruits.....	1.9	3.6	4.9
Dairy products.....	10.2	12.5	15.9
Chickens.....	2.3	3.0	4.2
Eggs.....	2.5	6.0	7.5
All other.....	22.5	22.8	19.0

¹ 4-year average.

¹ This record was published by the National Bureau of Economic Research, Bulletin 78, April 1940, under the title of "The Composition of Gross Farm Income Since the Civil War" by Frederick Strauss.

THE relative importance of the domestic market as a source of farm income has varied relatively little during the 60-year period from 1869 to 1929 on the basis of 5-year averages. In each of the 5-year periods of that interval the domestic markets contributed between 81 and 85 percent of the total gross farm income, and the export markets contributed between 15 and 19 percent; but in the more recent years the domestic markets contributed 92 percent and the foreign markets only 8. Leaving out cotton, the domestic markets contributed about 95 percent to total gross income in recent years, and the foreign markets about 5 percent.

Table 2. The Changing Relative Importance of Domestic and Foreign Demand for Farm Products

	Percent of total gross income from production derived from—		Percent of gross income from production (excluding cotton) derived from—	
	Domestic market	Foreign market	Domestic market	Foreign market
1869-73.....	83.4	16.6	91.3	8.7
1874-78.....	83.2	16.8	88.7	11.3
1879-83.....	80.7	19.3	85.9	14.1
1884-88.....	84.7	15.3	90.2	9.8
1889-93.....	82.4	17.6	88.1	11.9
1894-98.....	80.8	19.2	86.3	13.7
1899-1903.....	81.6	18.4	87.0	13.0
1904-08.....	83.3	16.7	90.1	9.9
1909-13.....	85.1	14.9	92.4	7.6
1914-18.....	82.4	17.6	86.0	14.0
1919-23.....	82.2	17.8	87.1	12.9
1924-28.....	85.3	14.7	91.3	8.7
1929-33.....	90.4	9.6	94.8	5.2
1934-37.....	91.6	8.4	95.3	4.7

THERE is a wide range of difference in the relative importance of the export market for the different farm products. In the case of cotton, the foreign market contributed two-thirds of the gross income up to the World War; in the 1920's slightly less than 60 percent; and in the recent years about 44 percent. As for tobacco, the export market contributed approximately 76 percent after the Civil War and about 40 percent during the 20 years before the World

Table 3. The Changing Relative Importance of Export Demand for Selected Farm Products

	Contribution of exports to gross income from production of—			
	Cotton	Tobacco	Wheat	Pork and pork products
1869-73.....	71.6	75.6	23.8	6.6
1874-78.....	70.2	62.4	25.1	13.0
1879-83.....	67.8	50.2	37.8	17.9
1884-88.....	67.2	50.1	29.3	12.4
1889-93.....	66.7	42.8	34.7	17.6
1894-98.....	69.2	41.6	34.3	18.8
1899-1903.....	67.3	39.8	34.6	20.9
1904-08.....	67.5	39.4	20.5	17.2
1909-13.....	67.6	41.4	18.0	13.3
1914-18.....	48.8	37.7	34.4	18.8
1919-23.....	58.4	44.0	34.9	21.1
1924-28.....	58.7	43.0	27.0	12.4
1929-33.....	56.4	38.8	15.7	6.9
1934-37.....	43.6	36.7	7.6	2.7

War. In recent years the export market has contributed approximately 37 percent.

In the case of wheat, the relative importance of the export market has varied with the cycles in domestic wheat production. The years 1880, 1900, and 1920 mark roughly the high points in the cyclical changes in wheat acreage and production. In these years wheat exports contributed around 35 to 38 percent to gross income from wheat. In the 10 years before the World War the comparable percentage was around 20, but during the 5 years 1929-33 the percentage fell to less than 16, and in the next 4-year period to less than 8.

In the case of pork and pork products, the relative importance has also varied with the changes in grain production. Around 1870 exports of pork and pork products contributed less than 7 percent to gross income from the production of hogs; around 1880, 18 percent; around 1900, 21 percent; immediately before the first World War 13 percent; around 1920, 21 percent; but in the 5-year period 1929-33, less than 7 percent; and for the period 1934-37 less than 3 percent.—L. H. BRAN.

Outlook for Clover and Alfalfa Seed

OUTSTANDING factors in the outlook for clover and alfalfa seeds are: (1) Large available supplies, (2) small imports, (3) comparatively low prices. Production of most of these seeds is somewhat smaller than last year, but the carry-over is large, and total supplies are generally above those of a year earlier and much above average.

The 1940 alfalfa seed supply is estimated to be about 81 million pounds of cleaned seed, or about 6 percent larger than the 1939 supply. On September 20 the average price received by growers for alfalfa seed was about \$14 per hundred pounds, cleaned basis, compared with about \$16.50 a year earlier. Imports of alfalfa seed during the period January-June totaled 2.1 million pounds, or slightly larger than in the first 6 months of 1939. Practically no alfalfa seed has been imported during the past 2 or 3 months. Since most of our alfalfa seed imports come from Canada, imports should not be greatly curtailed by war activities.

The 1940 red clover seed crop is estimated at 93 million pounds of thresher run seed, or about 10 million pounds smaller than a year ago. The carry-over, however, is unusually large, and the total supply is estimated at about 111 million pounds of cleaned seed, or about 6 percent larger than the supply last year. The average price received by growers for red clover seed in mid-September was about \$9.40 per hundred pounds for cleaned seed, compared with \$14.40 a year ago.

THE total supply of sweetclover seed for 1940 is 60 million pounds cleaned seed, compared with 71 million pounds last year. The sweetclover seed crop is about one-third less than last year as a result of reduced acreage. Yields were generally higher than those of 1939. Imports of sweet-

clover seed during recent years have amounted to as much as 10 percent of the total supply, but they have declined since early 1939, and in recent months have been negligible. The average price received by growers September 1 was \$3.50 per 100 pounds, compared with \$3.80 per 100 pounds last year.

The total supply of alsike-clover seed is estimated to be 24 million pounds cleaned seed, compared with 19 million pounds last year. Production of alsike-clover seed is estimated to be 38 percent larger than in 1939, due both to larger acreage harvested and higher yields. In early September the average price to growers was \$9.90 per hundred pounds as compared with about \$14.45 per hundred on the corresponding date last year.

The crimson clover supply is slightly larger than a year ago and the white-clover seed supply is much smaller. The price of crimson-clover seed was \$8.90 per 100 pounds in early September, or a little higher than last year. The price of white-clover seed averaged around \$45.00 per hundred pounds early in September, which is about \$15 higher than a year ago.

Imports of practically all clover seeds have fallen off substantially during the past year as a result of the war. Since in recent years the bulk of clover seeds imported came from European countries, it appears probable that imports will continue well below average for the duration of the war.

The supply of southern rice is about the same this year as last, the supply of Californian is slightly larger. Domestic consumption may increase during the coming year, but not enough to reduce total stocks to average proportions.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	(1910-14=100)					Taxes ⁶
				Whole-sale prices of all commodities ⁴	Prices paid by farmers for commodities used in ⁵ —			Farm wages	
					Living	Pro-duction	Living and production		
1925	91	98	101	151	164	147	157	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	158	147	153	180	281
1930	91	88	96	126	148	140	145	167	277
1931	75	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	76	96	109	108	109	85	187
1934	75	61	78	109	122	125	123	95	173
1935	87	69	80	117	124	126	125	103	180
1936	103	80	81	118	122	126	124	111	182
1937	113	94	84	126	128	135	130	126	187
1938	88	73	82	115	122	124	122	124	186
1939	108	83	82	113	120	122	121	124	190
1939—October	121	91	82	116			122	126	
November	124	93	82	116			122		
December	126	93	82	116	121	124	122		
1940—January	122	93	82	116			122	119	
February	116	89	82	115			122		
March	112	87	82	114	121	125	123		
April	111	86	82	115			123	124	
May	114	87	82	114			123		
June	121	89	82	113	121	125	123		
July	121	91	82	113			122	129	
August	121	94	82	113			122		
September	125	97	82	114			122		
October ⁷				114			122	129	

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chick-ens and eggs	All groups	
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	150	145	94
1927	128	126	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	153	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1939—October	77	74	73	128	112	112	108	97	80
November	79	75	66	123	107	117	117	97	80
December	87	82	65	96	101	118	97	96	79
1940—January	90	85	66	117	103	119	91	99	81
February	91	85	76	168	101	118	98	101	83
March	92	85	73	128	102	114	83	97	79
April	96	85	81	145	104	110	82	98	80
May	92	83	88	133	108	106	84	98	80
June	83	81	104	134	102	104	81	95	77
July	78	80	89	98	110	105	88	95	78
August	76	77	79	112	110	109	90	96	79
September	77	76	73	118	114	111	104	97	80
October	80	78	79	99	112	116	112	99	⁷ 81

¹ Federal Reserve Board, adjusted for seasonal variation. Revised August 1940.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914. ⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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EUROPEAN WAR AND NATIONAL DEFENSE hold the center of the farm scene this winter. Agricultural exports have shrunk, domestic markets have been expanded. Hard hit by the loss of exports are the producers of cotton, tobacco, wheat and fruits. Whatever the outcome of the war, the prospect is for small exports in the years ahead. Adjustments are needed to the changed conditions. * * * Efforts are being made to increase the purchasing power of low-income producers and consumers in our own country, to develop potential markets for larger quantities of foods and fibers. Five million needy persons will be able to get low-cost food under the Food Stamp Plan this winter, undernourished school children will get free lunches, large quantities of food will be distributed to persons on relief. * * * Prices received by farmers are tending to rise, but part of the increase will be offset by higher costs of production during the coming year. Ratio of prices received to prices paid will increase but probably will be 15 to 20 percent below pre-World War levels.

Commodity Reviews

DOMESTIC DEMAND: Up

THE sharp rise of industrial production, employment, and factory payrolls since last spring has been accompanied by a smaller yet noticeable improvement in consumer demand for farm products. Further substantial increases in industrial activity are not expected during the next several months, but a continuing gradual improvement in domestic demand for farm products is in prospect.

Several conditions have contributed to the increase in industrial output in recent months: The defense program has indirectly stimulated many lines of industrial production in addition to those directly affected by Government orders. Businessmen have been buying farther ahead, in fear of later price increases and difficulty in obtaining deliveries. A number of industries have been spending large sums to increase capacity for the handling of defense and export orders. The large-scale manufacture of some defense equipment already has begun; for example, deliveries recently have been made on a large order for tanks by a railroad-car manufacturing concern. Textile output, for both civilian and military uses, has been at a high rate for some time. The general increase in business activity has stimulated the sales and production of consumers' goods such as automobiles and furniture. Export of products to be used in war has assumed considerable proportions in some industries, including steel.

This activity has carried production in a number of important lines of industry close to capacity. It is probable, therefore, that the usual seasonal rise in output which occurs after January cannot be fully made in those months next year, consequently that seasonally corrected indexes of industrial activity will level off or decline slightly some time during the first half of 1941. If this were ac-

companied by a reduction in advance buying by business firms completing their inventory-building programs, there might even be a more noticeable recession. This would be only temporary, however, but might result in relatively little improvement in the consumer demand for farm products during the first half of 1941 compared with the last half of 1940.

F. L. THOMSEN.

EXPORT DEMAND: Down

Agricultural exports have declined since last January, and the outlook for the duration of the war is highly unfavorable. Apparently the only condition which might reverse this situation would be such an increase in shipping losses as to make it impracticable for Great Britain to purchase its requirements of meat and other products from more distant surplus-producing nations. This was a major factor in the expansion of United States export demand during the World War, although the extension of credits by the United States at that time contributed greatly to the movement of products abroad.

Even if it became much more difficult for Great Britain to transport beef and other products from Australia, Argentina, and other distant countries, however, Canada is in a position to supply a much larger part of British requirements than during the World War. For example, present stocks of wheat in Canada are large enough to care for both domestic consumption and British import requirements for 2 years. As long as the amount of dollar exchange available to Great Britain for use in buying war materials is limited, she undoubtedly would turn to Canada for most of her requirements if some of her present sources of supply were cut off by shipping difficulties.

F. L. T.

PRODUCTION: Increase

Crop estimates were raised last month for cotton, corn, dry beans, peanuts, white potatoes, tobacco, sugar beets, apples, pears, grapes, and pecans. Reductions were reported for buckwheat, grain sorghums, soybeans, sweetpotatoes, and sugar cane for sugar. The Crop Reporting Board estimated that crop production this year was the second largest on record. Largest on record was in 1937.

Production of feed grains for all purposes was estimated at 95.8 million tons, or about 2 percent below the predrought average. "This tonnage is large enough," it was stated, "to permit feeding present livestock about as liberally as in any of the last 15 years without utilizing any of the large reserves of feed grains accumulated since the drought. * * * Production of most of the principal food crops appears ample."

PRICES: Higher

Prices of some farm products moved a notch higher during the past month. The Government index of prices of all

commodities combined was 99 for November, compared with 99 in October, and with 97 in November last year. The 5 years 1910-14 equals 100. Products rising in November included wheat, cotton, beef cattle, turkeys, eggs, and butter. Prices of

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1939			
June	89	120	74
July	89	120	74
August	88	119	74
September	98	122	80
October	97	122	80
November	97	122	80
December	96	122	79
1940			
January	99	122	81
February	101	122	83
March	97	123	79
April	98	123	80
May	98	123	80
June	95	123	77
July	95	122	78
August	96	122	79
September	97	122	80
October	99	122	81
November	99	122	81

¹ Ratio of prices received to prices paid

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	November 1909-13	November 1939	October 1940	November 1940	Parity price, November 1940
Cotton, lb.	cents.. 12.4	12.1	8.80	9.35	9.38	15.75
Corn, bu.	do 64.2	59.4	46.8	59.4	56.9	81.5
Wheat, bu.	do 88.4	87.3	73.1	68.2	72.5	112.3
Hay, ton.	dollars 11.87	11.89	7.51	6.99	7.25	15.07
Potatoes, bu.	cents 69.7	61.4	69.2	52.0	52.4	² 86.5
Oats, bu.	do 39.9	38.2	32.1	28.3	31.7	50.7
Soybeans, bu.	dollars (1)	(1)	.82	.67	.84	^{1 4} 1.73
Peanuts, lb.	cents 4.8	4.5	3.39	3.26	3.24	6.10
Apples, bu.	dollars .96	.80	.62	.72	.75	1.22
Beef cattle, cwt.	do 5.21	5.01	6.89	7.50	7.58	6.62
Hogs, cwt.	do 7.22	6.95	5.87	5.83	5.62	9.17
Chickens, lb.	cents 11.4	10.8	12.4	13.3	13.1	14.5
Eggs, doz.	do 21.5	27.8	25.8	23.7	26.2	³ 39.4
Butterfat, lb.	do 25.3	28.5	28.1	28.8	30.9	³ 35.4
Wool, lb.	do 18.3	18.5	27.6	29.9	31.5	23.2
Veal calves, cwt.	dollars 6.75	6.74	8.64	9.11	9.06	8.57
Lambs, cwt.	do 5.87	5.31	7.48	7.64	7.78	7.45
Horses, each.	do 136.00	133.00	77.60	71.00	69.60	173.50

¹ Prices not available.

² Post-war base.

³ Adjusted for seasonality.

⁴ Soybeans for seed.

corn, hogs, oranges, and grapefruit declined.

Prices paid by farmers for commodities used in production held steady, but are expected to advance in coming months. The index of prices paid was 122 for November, compared with 122 in October, and with 122 in November last year. Both prices received and prices paid are expected to increase during the coming year. The ratio of prices received to prices paid was 81 in November, compared with 81 in October, and with 80 in November last year.

INCOME: Increase

The first 10 months of 1940 returned farmers a cash income of 7,314 million dollars from marketings and Government payments. This compares with 6,833 million dollars in the same period of 1939. The last 2 months of 1940 will return at least as much as in the like period last year. Total for 1940 may exceed 9,000 million dollars, compared with 8,500 million in 1939.

All major groups of farm commodities yielded larger cash income from marketings in the first 10 months of 1940 compared with 1939, but some in much smaller degree than others. These include cotton and cottonseed, tobacco, poultry and eggs, and fruits. Largest dollar gains are shown for grains, dairy products, meat animals, and vegetables.

Farmers in 38 States had larger cash income from marketings and Government payments during the first 9 months of this year compared with last. Income in Georgia and North Carolina was larger, but in other States of the Cotton Belt it was smaller. Unfavorable weather damaged Southern truck and fruit crops early in the year, smaller income was received from hogs, and the cotton crop was late.

Largest increases in income during the first 9 months of the year were in North Dakota, Montana, South Dakota, and Minnesota.

The following table gives totals for the last month of record, and cumulative figures for the first 10 months, with comparisons:

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
October:			
1940.....	1,049	76	1,125
1939.....	960	82	1,042
1938.....	932	62	994
1937.....	1,029	5	1,034
January-October:			
1940.....	6,697	617	7,314
1939.....	6,193	640	6,833
1938.....	6,206	395	6,600
1937.....	7,136	355	7,491

WHEAT: Supply

The situation as to wheat supply, consumption, and prospective carry-over seems to be working out according to earlier expectations: Total United States supply for 1940-41 is 1,076 million bushels, prospective domestic disappearance during this period is 685 million bushels, the quantity available for export or carry-over is 391 million bushels. Probably 369 million bushels will be carried over as of July 1 next. This is about 85 million bushels more than on July 1 last. It would be the largest carry-over on Government record.

Prices of wheat advanced last month to highest figures since mid-summer, as increasing quantities of the grain were put under Government loan. At prices then prevailing an export indemnity of about 30 cents per bushel would be required to export wheat to Europe from Gulf ports, and of 26 cents from Pacific ports. These figures are about the same as a month earlier. * * * World wheat supply (excluding U. S. S. R. and China) is about 5,445 million bushels for 1940-41, compared with 5,475 million bushels in 1939-40.

COTTON: Record

Cotton has been selling at higher prices this year than last, supported by Government loans and heavy con-

sumption by cotton mills. Mill consumption has been running at the rate of $8\frac{1}{2}$ million bales a year—a new high record. Sales of unfinished cotton goods have been reported in excess of current production, most mills are booked well in advance, prices of textiles have gone up moderately. Cotton of the 1940 crop under Government loan in early December totaled $2\frac{1}{4}$ million bales. This raised Government owned and financed stocks to about $10\frac{1}{2}$ million bales.

In contrast with the improvement in domestic consumption and prices is the gloomy situation abroad. The cotton mills of the world outside the United States have slowed—except for the manufacture of war materials. United States exports of raw cotton totaled only 450,000 bales in the first 4 months of the current season, as contrasted with 5 times this quantity in the same period last year. Of the total to date this season, about three-fifths went to Great Britain.

FEED GRAINS: Increase

The supply of feed grains was increased last month by an estimated increase of 3 percent in the 1940 corn crop. The 1940 supply of corn, including corn under seal or held by the Government on November 1, was estimated at about 3,135 million bushels, compared with 3,202 million bushels last year. This is the second largest supply of corn since 1932. But the quality of the 1940 crop was reported as being "not quite so good" as in the preceding 3 years.

Reports were received also of an increase over early estimates in the number of cattle and lambs on feed this season. However, the total number of stock to be fed is smaller than in 1939, since there are fewer hogs on farms. Approximately 132 million grain consuming animals will be on farms on January 1, 1941 compared with nearly 137 million at the beginning of 1940. Excluding the quantity of corn sealed or held by the Government, the supply of feed grains per

animal on farms is slightly larger than in 1939, and 5 percent larger than the 1928-32 average.

Announcement was made in late November that the Commodity Credit Corporation will make loans on 1940 corn to farmers in the commercial corn area at 61 cents per bushel. The 1939 rate was 57 cents.

CATTLE: On Feed

AMS expects that as many—possibly more—cattle will be fed this season compared with last. November reports indicated decreased feeding in Corn Belt States east of the Mississippi River, a considerable increase in Corn Belt States west of the river, not much change in the total in the Western States, and an increase in Texas and Oklahoma.

Total shipments—direct and through stockyards—of stocker and feeder cattle into 7 Corn Belt States were 11 percent larger in the 4 months, July through October, this year compared with last. But a large proportion of these shipments included light-weight feeder cattle. This means that marketings of grain-fed cattle in the first half of next year may be smaller than in the like period of 1940. Marketings will probably increase in the last half of 1941.

Prices of choice and prime beef steers in early November were the highest in 3 years. Strength was attributed chiefly to improved consumer demand. Prices of stocker and feeder cattle were 50 to 75 cents higher in early November this year compared with last, but lower in relation to fat cattle prices.

HOGS: Early Marketings

Farmers have been marketing their spring pig crop earlier than usual this season. This indicates that marketings in the second quarter—January-March—of the current marketing year will be considerably smaller than in the like period of 1940. A greater-than-usual seasonal decrease in hog slaugh-

ter in late winter and early spring would be accompanied by a fairly sharp advance in hog prices, particularly if consumer demand conditions continue to improve during the next few months.

Both the spring and fall pig crops were smaller this year than last—the spring crop by 8 percent, and the fall crop by at least 12 percent. Reduction in the fall crop means a reduction in hog marketings in late spring and summer of 1941—a price-supporting factor during the last half of the current marketing year. For the entire 1940-41 marketing year, hog prices are expected to average substantially higher than in 1939-40.

Available information suggests that the 1941 spring pig crop will be moderately smaller than the spring crop of 1940, but that the 1941 fall crop may be larger than that of 1940. Increase in the fall crop would be the result of a favorable ratio of hog prices to corn prices next spring and summer. Nevertheless, market supplies of hogs are likely to be no larger in 1941-42 than in the current marketing year.

LAMBS: Larger Supply

November reports increased the estimates of numbers of lambs on feed this season. Larger slaughter supplies of sheep and lambs during the 1940-41 fed lamb marketing season—December through April—this year than last were indicated. BAE expects, however, that the effect of the increase in slaughter supplies upon lamb prices will be more than offset by the stronger consumer demand for meats and the higher prices for wool this winter and next spring than last.

AMS reported that the movement of feeder lambs to Corn Belt feed lots this fall was not only larger, it was also later than last year. Unless marketings from the Corn Belt should be much larger in November and December this year than last,

the number on feed in that area will be substantially larger this January 1 than last. Much will depend, however, upon the development and disposition during December of the relatively large number of lambs fattening on wheat pastures.

Reports indicated fewer lambs being fed in the Western States this season than last—especially in Colorado. But a material increase in Texas, and some increases in North Dakota and in the western New York feeding area, were indicated. Feeding in Oklahoma may be no larger this season than last.

WOOL: Good Demand

Wool continues in especially good demand as mills work day and night to fill large Army contracts. Prices of wool are higher than at this time last year. The high level of mill consumption calls for heavy imports of wool this winter and next spring, principally of fine wool required in manufactures to fill Army contracts. * * * Total imports of apparel wool in 1940 have been the largest in recent years.

The National Defense Advisory Commission recently announced that arrangements had been made to bring an emergency reserve supply of 250 million pounds, grease basis, of British-owned Australian wool to the United States for storage in bond. Ownership of this wool will remain in the British Government, and the wool may not enter the market without the approval of appropriate American officials. No withdrawal will be possible except where deficiencies appear in the supply of domestic wool or where normal imports are interrupted.

Domestic mill consumption of wool next year probably will be larger than in the current season. This will be an important factor supporting prices of the domestic clip of wool in 1941. Farm income from wool will probably be larger than in 1940.

WORK STOCK: Decrease

The number of horses and mules on farms continues to decline with no reversal of the long-time downward trend in sight for the next few years. Principal factor, of course, is the increase in the use of mechanical power. A preliminary Government estimate is that numbers of both horses and mules on January 1 will be the smallest in 30 years of record—10,616,000 horses, and 4,321,000 mules.

The European War has resulted in no export demand for horses, but it is likely that purchases of horses by the United States Army will increase during the coming year. An advance in prices of farm tractors would be a contributing factor tending to prevent a further decline in prices of horses and mules during 1941; nevertheless, it appears unlikely that prices of work stock will advance greatly during the next few years.

POTATOES: Low Priced

Potatoes are lower priced this winter than last, since markets are being supplied from a late crop that is 19 million bushels larger than in 1939. The late crop was estimated in November at 309 million bushels, compared with 290 million in 1939, and with 296 million average for 1929-38. Approximately half of the increase this year compared with last is in Maine, New York, and Pennsylvania. Most of the remainder is in the Western States. In contrast, the estimates for sweet-potatoes were reduced in November. The 64 million bushels total for 1940 is the smallest since 1930.

TRUCK CROPS: Down

Truck crops also are lower priced this season, a situation that is likely to continue through early winter unless the crops in the South should be severely damaged by freezing weather. To date, the supplies of fall truck

crops have been more plentiful than in 1939. The Crop Reporting Board estimated in November an increase of 16 percent in acreages of 14 commercial truck crops planted or to be planted for fall and winter harvest this season compared with last.

Crops being harvested in the South and in California in mid-November included an unusually large fall crop of snap beans, and slightly larger fall crops of cauliflower, cucumbers, eggplant, kale, spinach, peppers, and tomatoes. For market in late winter and early spring, producers reported intentions to increase the acreage of early cabbage by approximately 11 percent, and of early onions by 48 percent. An increase of 1 percent was indicated in acreage of asparagus for harvest for the fresh market and for processing in the spring of 1941 compared with 1940.

FRUITS: Plentiful

The supply situation as to fruits was little changed during the past month, but evidence accumulated of better consumer demand this winter than last. Apple markets were expected to improve as shipments eased following the heavy concentration of supplies that lowered prices in early November. Florida oranges were selling higher in New York than at the corresponding time in 1939, even though estimates of production were higher than the final outturn last year.

The total commercial crop of apples is about 20 percent smaller this season than last, due to reductions in Eastern and Central States. An increase in production in Western States resulted in cold-storage holdings on November 1 slightly larger than a year earlier. Production of fall and winter pears in the Pacific Coast States was indicated to be about 10 percent larger than in 1939.

Large quantities of late pears have been purchased for relief distribution,

nevertheless it was expected that because of the loss of exports a large part of the crop would not be harvested.

FATS, OILS: Record

Production of fats and oils from domestic materials in 1940 was the largest on record—8.8 billion pounds (tentative estimate) compared with 8.2 billion pounds in 1939. Most of the increase was in lard, inedible tallow and greases, soybean oil, and linseed. Storage stocks of these fats and oils are large. Production from imported materials during the first 9 months of 1940 was about the same as the 727 million pounds produced in the like period of 1939.

Prices of domestic fats and oils except butter have been materially lower this fall than last. Lard in October sold for lowest prices since March 1933. But since hog slaughter is likely to be reduced in the first quarter of 1941, it is expected that lard prices may show fairly substantial gains in late winter and next spring.

DAIRY: Good Prospects

Dairymen are about to begin a winter of best prospects for production, prices, and income in many years. The number of milk cows on farms is the largest in 5 years, the supply of feed grains is the second largest in 20, consumer demand for milk and dairy products is unusually good.

AMS reported a generally upward trend in milk prices in early November, a continued broad demand for fluid consumption, and rising prices of manufactured dairy products. (The seasonal peak in butter prices usually is in December.) The retail price of milk at New York City was advanced $\frac{3}{4}$ cent per quart on home deliveries, and 1 cent per quart on milk sold through stores.

Of interest to the fluid milk industry is a recent Federal court decision legalizing the use of paper containers in Chicago, and extension of a pro-

gram to supply milk at low cost to undernourished children in New York City. Milk is made available at 1 cent a glass to needy New York school children, in addition to being supplied free with free school lunches.

POULTRY: Prices Up

Practically all kinds of poultry are selling higher this winter than last, due to smaller marketings and increased consumer buying power. An important development during the past month was the destruction of more than a million turkeys by pre-season storms and freezing weather in the West. Whereas the turkey crop had been estimated at more than 33 million birds, the final figure will be nearer 32 million. This would be 2 to 3 percent less than the 1939 turkey crop.

The smaller crop of turkeys this year plus good consumer demand should mean a better Christmas market and winter storage demand than was indicated earlier in the season. Another strengthening factor is the smaller supply of chicken this winter than last. * * * Commercial broiler production will probably be larger this winter than last.

EGGS: Prices Up

Production of eggs is increasing seasonally, but the total is smaller than at this time last year. Production per hen holds up well, but there are fewer layers on farms. The number of pullets not yet of laying age was 7 percent smaller this November 1 than last. Farmers will begin the new year on January 1 with about 5 percent fewer layers than at the beginning of 1940. Prospect is for smaller egg production and higher prices in the first half of 1941 as compared with the like period of 1940. The cost of poultry feed in coming months may be about the same as it was a year earlier, possibly a little higher, but fewer eggs will be required to buy 100 pounds of poultry ration.

FRANK GEORGE.

GOVERNMENT PROGRAM FOR 1941

AS 1941 is about to get underway, the problems of agriculture are being attacked on many fronts. Objectives range from the conservation of the soil and the rehabilitation of farm families, to rural electrification, adjustments in production, the marketing of agricultural surpluses, and improvements in the national dietary.

The plight of the share cropper and the farm tenant, and of the migrant worker pushed off the land, is studied, and ways sought to lighten their burden. Loans and grants are made to low income farm families for the implements of production, and assistance given owner-operators through the reamortization of mortgage debt. Adjustments in production are buttressed by crop insurance, commodity loans, and price parity payments to cooperating farmers.

Efforts are directed at expanding the domestic and foreign markets for farm commodities, systems of marketing quotas and marketing agreements are in operation, surpluses are stored in ever-normal granaries against future needs. City families distressed for lack of employment are helped to buy food at low cost, millions of school children the country over are supplied with free lunches, hundreds of thousands of adults are supplied with free food under relief distribution.

The salient features of these various action programs as they are now constituted are brought together in the accompanying group of articles. Significant changes which may be made in these programs as a result of the impact of the war and the national defense program will be reported in subsequent issues of "The Agricultural Situation."—Ed.

Soil Conservation

THE Soil Conservation Service is helping farmers and public agencies to attack a wide variety of physical land problems, with a view to advancing social and economic conditions through desirable adjustments in the use of agricultural land.

An increasing amount of the work this year has been, and will continue to be, concentrated in local soil conservation districts. These local subdivisions of the States, organized by farmers under State law, have been established in 38 States. Upon request, the Service goes into a district and plays an active part in its operations program on the land. It helps

make preliminary surveys and assigns a technical staff to aid the farmers in developing and carrying out soil conservation plans. The Service also makes equipment available, provides seed and seedlings for erosion control plantings, and furnishes C. C. C. labor to assist in getting conservation work started. By November 15, 1940, assistance of this general type was being extended to 294 districts, representing a total area of more than 200 million acres in 34 States.

CLOSELY related to the work in cooperation with soil conservation districts is the operation of erosion control demonstration projects. In 180 of these projects in 45 States,

Hawaii, and Puerto Rico, farmers are carrying on erosion-control demonstrations under Soil Conservation Service supervision. Similar work of a demonstrational nature is performed by more than 350 C. C. C. camps under Soil Conservation Service supervision throughout the country.

To date, more than 90,000 farmers, representing nearly 26 million acres of land, are cooperating with the Service in the camp and project areas. In addition, the Service helps to plan erosion-control programs on scattered demonstration farms in conjunction with the Extension Service. Such plans have been made for 2,200 farms in 42 States.

THE Soil Conservation Service is responsible for the acquisition and development phases of the Department of Agriculture's land utilization program. This program aims to relieve social and economic maladjustments in rural areas by purchasing land unsuited to cultivation and developing it for some better adapted use, such as forestry, grazing or wildlife. A large acreage of such land purchased has been transferred to State agencies under long-term lease, but approximately 6 million acres, located chiefly in the Great Plains region and used primarily for grazing, are under Soil Conservation Service management. Purchases of land this year will approximate 100 thousand acres. The total area of land acquired since the beginning of this program is approximately 11 million acres.

The water facilities program, authorized by the Pope-Jones Act of 1937, is being carried forward in arid and semiarid sections of 17 western States by the Bureau of Agricultural Economics, the Farm Security Administration, and the Soil Conservation Service. In areas selected for development, the Service is helping farmers and ranchers to build or install facilities such as dams, stock ponds, wells, pumps, and diversion structures.

Service technicians also provide assistance in the development of conservation plans on farm or range management for all lands benefitting from water facilities work. Assistance under the water facilities program has been extended to some 2,500 families, representing approximately 1,500,000 acres of land.

UNDER authority of the Omnibus Flood Control Act of 1936, the Service is collaborating with the Forest Service and the Bureau of Agricultural Economics in a program of upstream run-off retardation. These three agencies have now completed preliminary examinations of 112 major watersheds, and detailed surveys are completed or under way in 42 of them to provide a basis for actual operations.

One project was recently approved, and work will begin immediately on a broad watershed improvement program for the Los Angeles River in California. This coordinated watershed and channel improvement program represents a new approach to the national problem of flood control. It recognizes the importance of upstream control by proper conservation use of land where floods originate. It involves cooperative efforts of all those whose activities affect flood control, including farmers on the land, cities along the streams, and State and Federal agencies.

The Soil Conservation Service is responsible for the supervision of farm forestry projects in predominantly agricultural areas. In these projects, the Service helps farmers build up their woodlands, both for income production and erosion control. At the same time, farmers participating in the program are assisted in the development of conservation plans for croplands and pastures. So far 44 farm forestry projects have been established in 33 States.

The Service is supervising the work of 38 C. C. C. camps engaged in farm-drainage work in nine States east of

the Mississippi River. The enrollees work in public drainage districts clearing out ditches, repairing tile drains, and making other improvements in existing drainage systems. To date, about 6,000 miles of ditches and 345 miles of tile have been strengthened and improved under this program.

IN addition to its action work on the land, the Service is conducting a comprehensive program of research. Problems connected with soil conservation, flood control, farm drainage and irrigation are being investigated in co-operation with State agricultural experiment stations and the Bureau of Agricultural Economics at 127 field

stations all over the country. Significant research findings are used to implement the Service's operations program and are made available to other agencies and to the public generally.

Surveys of agricultural land to determine the type of soil, amount of slope, degree of erosion, and present use are an essential preliminary to most of the Service's work. Detailed surveys have been completed on approximately 40,000,000 acres, and are under way on 182,000,000 acres more, largely within soil conservation districts.

H. H. BENNETT,

Chief, Soil Conservation Service.

Farm Security

IMPROVED supervisory methods resulting from 5 years of experience will enable the Farm Security Administration to "dig deeper" and spread its funds farther among needy farm families in 1941, according to present plans.

An estimated 94,000 new families will receive rehabilitation loans accompanied by complete farm and home management plans. In addition, F. S. A. through its 2,000 county offices will service the loans and assist with the farm and home operations of more than 560,000 rehabilitation borrowers whose loans are now being repaid.

A combination loan-and-grant technique coupled with intensive supervision will, it is believed, enable F. S. A. to reach in substandard areas many families who have previously been unable to support a loan program on their small farms.

FOR rehabilitation loans in 1941 F. S. A. has available \$125,000,000 in advances from the Reconstruction Finance Corporation. For other

phases of F. S. A.'s rehabilitation program Congress appropriated \$59,000,000 from emergency relief funds.

With the \$59,000,000 in direct appropriations, F. S. A. is financing four different programs—migratory labor camps, water facilities, farm debt adjustment, emergency grants—and bearing the expense of loan servicing, farm and home supervision, and administration.

The migratory labor camp program is being expanded to meet the shifting pattern of agricultural labor in the Deep South and along the Eastern Seaboard. An estimated 5 new standard labor camps, 7 light construction camps, and 20 mobile units are to be built for use in these and other areas this fiscal year. Most of the camps now in operation are in the Southwest and West Coast States.

In collaboration with the Soil Conservation Service and Bureau of Agricultural Economics, F. S. A. will expand its program of loans to low-income Western States farmers for the acquisition of small water facilities. F. S. A.'s voluntary debt adjustment service available to all farmers will, as in the past, be maintained through

2,900 local citizens' committees in nearly every agricultural county.

IT is impossible to estimate the number of direct grants which F. S. A. will make to needy farm families in 1941. F. S. A. grants are small cash advances made in times of dire need or emergency. Families receiving grants agree to carry out certain simple measures for farm and home improvement. Probably more than half of the total grant funds in 1941 will be utilized in the combination loan-and-grant programs to assist particularly disadvantaged families in developing their resources.

An advance of \$50,000,000 in R. F. C. funds will enable F. S. A. to expand its program of farm purchase loans to tenant farmers during the fiscal year. It is expected that between 8,000 and 9,000 purchase loans will be made in 1,639 counties where tenancy is prevalent. Some 13,000 of these loans were made by F. S. A. in the first 3 years of the program.

As a result of an amendment to the Agricultural Appropriations Act of 1941, farms for tenants cannot be purchased if they have a value greater than that of the average farm unit of 30 acres or more in the county in which the purchase is made.

F. S. A. is administering 164 rural homestead projects initiated by predecessor agencies. Congress appropriated \$1,500,000 for the maintenance of these projects, many of which will be largely self-supporting during the year.

IT is anticipated that cooperative activities of low-income farmers will expand with F. S. A. help in 1941. An estimated 5,000 loans will be made to groups of small farmers who will get together to jointly purchase equipment and other farm services. There are already 16,000 small co-ops serving nearly 270,000 small farmers in this way.

Another cooperative development which will doubtless expand is the land leasing association in the South, through which sharecropper and farm labor families obtain long-term leases on contiguous tracts. Rehabilitation loans will be made to members to enable them to buy tools and equipment needed for individual farm operations on land leased by the association.

C. B. BALDWIN,

*Administrator, Farm Security
Administration.*

Rural Electrification

THE National Defense Program is deeply affecting the activities of the Rural Electrification Administration this fiscal year. R. E. A.-financed rural electric power systems, most of them operated by farmers' cooperatives, are in 45 of the 48 States. These systems, built primarily to enable farm families to obtain central station electric service at rates and on terms they can afford, are providing power to many hundreds of small industrial plants, of which some produce essential defense materials and others process local raw materials.

The systems are also furnishing energy to Army camps, C. C. C. camps, N. Y. A. youth training centers, flying fields, airway light and radio beacons, and other establishments vital to national defense. They are in a position to furnish power for many more plants as further decentralization of industry creates the demand.

AS of September 30, 1940, a total of 664 energized systems were operating 256,000 miles of lines serving 630,000 farm families and other rural users. It is expected that borrowers will complete construction of 70,000 miles of lines to serve 175,000

farm families and other rural users this fiscal year; construction financed out of 1941 funds but extending into future fiscal years is expected to add another 42,000 miles to serve 105,000 users. R. E. A. expects to allot \$100,000,000 during the fiscal year; of this, \$51,758,000 had been allotted by September 30.

Continued efforts are being exerted to make electrical farm equipment available at reduced prices, by cooperating with the Agricultural Extension Service and other educational agencies in helping system members to apply electricity effectively to farm production, and by helping develop practical electrical equipment that the farmer himself can build at small expense. As an increasing number of R. E. A. systems add full-time utilization specialists to their staffs, more effective guidance of members in the productive use of electricity is to be expected.

R. E. A. is continuing its efforts to reduce the cost of building rural lines. As a result of standardization of design, of more effective use of assembly-line methods of construction, and of development of new equipment, the average over-all cost of R. E. A.-financed lines has been reduced to less than \$800 a mile. This is about half the reported cost of rural lines built before R. E. A. was established in 1935. The bare construction cost is of course much less.

At the same time, borrowers are reducing the cost of wiring to their members by providing the main service entrance, for which members formerly paid \$10 to \$25 or more, depending upon the type of service. This practice, introduced during the

past summer, helps to widen the areas that can be served on a self-liquidating basis. Increasing use is being made of the self-help plan, whereby members themselves do much or all of the nontechnical work, such as clearing rights-of-way and staking lines. They are paid at the prevailing rates and assign their wages to pay for wiring and for a few appliances.

AS THE number of systems in operation increases, R. E. A. tends to become increasingly a clearing house of information about the specialized technical aspects of operating and maintaining strictly rural systems. A series of system superintendents' conferences is proving valuable both to the systems and to R. E. A. These conferences are being held at 6-week intervals during the current year. For each, a group of superintendents, usually all from the same region, spend a week in Washington discussing various phases of their work with one another and with members of the R. E. A. staff, besides attending formal sessions at which they hear talks on the various problems which a rural electric system must meet. These conferences make for more effective cooperation between R. E. A. and the systems, and at the same time strengthen localized control.

Meanwhile administrative procedures have been speeded up and simplified, with the result that the time required for the steps that must be taken between the allotment of funds and the start of construction has been reduced materially.

HARRY SLATTERY,

*Administrator Rural Electrification
Administration.*

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An index of articles which have appeared in *The Agricultural Situation* during the past year—1940—is obtainable from the Bureau of Agricultural Economics, Washington, D. C.

Farm Credit

THE volume of financing through the Farm Credit Administration was larger in 1940 than for several years past. Farmers obtained \$460,000,000 of credit during the first 9 months of the year compared to \$416,000,000 in the corresponding period of 1939. A further increase may be looked for in 1941 if present prospects materialize. The gradual increase in short-term loans to farmers by production credit associations and in financing by the banks for cooperatives has continued. The downward trend in new financing which began in 1936 has been definitely reversed.

Farmers obtained 28,652 land bank and Commissioner loans aggregating \$74,629,000 during the first 9 months of 1940 compared to 22,817 loans for \$59,860,000 during the like period of 1939. As in the past the largest percentage of financing consisted of loans made to farmers who wished to avail themselves of land bank and Commissioner terms to refinance old debts, but an increasing proportion of loans represented new financing. At present about 1 in every 4 loans is being made to finance the purchase of a farm. This is the highest percentage of loans obtained for this purpose in the history of the banks.

BY action of Congress, the temporary interest rate on most land bank and Commissioner loans is $3\frac{1}{2}$ percent until June 30, 1942. The contract rate which farmers otherwise would be paying averages about 5 percent. The substantial saving which farmers are realizing because of the reduced rate is equivalent to an increase in farm income. The saving is important to the farmer who is repaying old debts, and also to the farmer who is trying to get a start toward farm ownership by purchasing property on a long-term mortgage contract.

Farmers' principal payments on Federal land bank loans, including loans paid in full, aggregated \$70,-

400,000 in the first 9 months of 1940, or an increase of 7 percent compared with the like period of 1939. Corresponding payments on Commissioner loans amounted to \$43,700,000, or a decrease of 6 percent.

Although the dollar amount of principal payments on Federal land bank loans was greater than in 1939, the increase was accounted for largely by farmers with relatively favorable credit positions. In the 12 months ending September 30, 1940, the proportion of delinquent land bank loans increased from 22 to 23 percent. The proportion of delinquent Commissioner loans decreased, but this may have been accounted for by reamortization of loans.

In some of the middle western States loan payments increased, but not in proportion to the rise in farm income in those States. There were sharp decreases in some of the cotton and tobacco States. The lateness of the cotton crop accounts in part for some of the slow payments in cotton States. Some farmers, particularly in the export-crop areas, face difficulties in meeting their mortgage loan payments.

CONSIDERABLE progress toward the solution of some of these farm debt difficulties is being made by reamortizing relatively short-term mortgages for longer terms and by placing loans of excessively indebted families on a sounder basis. More than 100,000 Commissioner loans were reamortized in the 12 months ending September 30, 1940. Altogether about half of all Commissioner loans outstanding are now on a 20-year basis or longer. Beginning in December 1939, the land banks and Commissioner granted "variable and suspended payment" plans on about 6,000 loans; and "standstill agreements" were put into effect on about an equal number of second-mortgage Commissioner loans. Most of the loans so affected are in the Great Plains area, particularly in North Dakota.

For the benefit of farmers who lost their properties through land bank

foreclosure, most of the banks began late in 1939 to resell farms to former owners or relatives, where it is possible to do so with reasonable chances of success. In other instances long-term leases were made, with option to purchase. Since December 1939 nearly 2,000 farms have been sold or leased to former owners or relatives.

THE number of foreclosures by the land banks has declined markedly during the past year. This has been due in part to special measures adopted by the banks during the past 2 years to keep heavily indebted families on the land, and due in part to increases in farm income. Land bank and Commissioner foreclosures and voluntary deeds dropped from 14,629 in the first 9 months of 1939 to 6,414 in the corresponding period of 1940. The market for acquired real estate continued favorable, 10,747 farms being sold in 9 months of 1940, or 4 percent more than in the like period 1 year earlier. With sales running ahead of acquisitions, the inventory of real estate on hand dropped to 31,027 farms, as of September 30, 1940, a decline of more than 16 percent during the past year.

FARMER-members of the 525 production credit associations borrowed \$241,000,000 in the first 9 months of 1940, compared with \$226,000,000 in the same period last year. This is the seventh successive year in which volume of business of these associations has increased. The

4½ percent interest rate established in early 1939 has been continued. Their 290,000 farmer-members now have \$16,500,000 invested in the voting stock of these associations and \$600,000 in nonvoting stock. Associations have built up out of their earnings reserves amounting to \$18,000,000. These reserves serve as a strong protection for stock held by members. Because of the strength of their financial position, the associations this fall have found it possible to repay \$13,700,000 of the capital supplied by the Government through the Production Credit Corporations of the districts. This money has been returned to the United States Treasury and farmers now own approximately 22 percent of the associations' total stock.

FARMERS' marketing and purchasing associations borrowed \$60,000,000 from the Banks for Cooperatives during the first 9 months of 1940 as compared with \$51,000,000 in the same period a year ago. The 13 banks have financed over 2,600 farmers' cooperatives and mutual companies during the past 7 years and supply an estimated 25 percent of the total credit used by all farmers' cooperatives. Losses have amounted to only a small fraction of 1 percent of the loans made.

A. G. BLACK,
*Governor, Farm Credit
Administration.*

Agricultural Adjustment

AS the United States defense program goes forward, 6 million farmers are preparing to carry on with a program essential to preparedness. In the 1941 A. A. A. farm program,

this army has working plans for its part in America's defense and for protection against war's worst effects on agriculture.

The 1941 program has been strength-

ened by additions to the basic framework so that farmers may continue to develop the Ever-Normal Granary, to conserve our soil while meeting all defense requirements, and to provide economic defenses for agriculture. Beyond this, the 1941 program serves to hold the machinery of the farm program in readiness so that the productive power and the group strength of agriculture can be further mobilized if the national need arises.

Minor but significant changes in the agricultural conservation program for 1941 are designed to encourage and obtain more effective conservation on American farms. Each new provision is based on the experiences of farmer committeemen in administering the program in thousands of communities. All these changes have been discussed and reviewed at conferences of farmers in the counties, districts, States, and regions, as well as at the national A. A. A. conference held in Washington last July. Adopted according to democratic procedure—as the result of approval by the majorities—the changes provide increased opportunity for county A. A. A. committees to adapt the farm program to individual farm requirements.

THE most significant contribution of the 1941 program to farm conservation lies in three provisions which an individual county association may substitute for total soil-depleting acreage allotments in areas where feed crops are not generally grown for market and where greater conservation can be obtained under the alternative. These provisions are: (1) Establishment of a 5-year conservation plan for a farm, with deductions from allotment payments for failure to attain the 1941 portion of the plan; (2) determination of a minimum acreage requirement of erosion-resisting land uses, with deductions from payments for failure to maintain this acreage in erosion-resisting crops and land uses; and (3) provision that no

farm can earn a greater percentage of its payment on special acreage allotments than the percentage earned under the soil-building allowance.

The program for 1941 also contains a number of provisions which give further consideration to the needs of the operators of small farms. The provision under which at least \$20 may be earned on any farm is continued for 1941. On farms where this provision applies, in specially designated areas, it will be possible for any part of the soil-building allowance to be earned by carrying out locally adapted practices which may not be specifically included in the program but which are recommended by local committeemen. In addition to the \$20 payment, as much as \$15 may be earned on small farms by planting forest trees, making a maximum earned payment of \$35. Except in the surplus feed areas, any farmer may grow as much as 30 acres of soil-depleting crops without incurring a deduction for exceeding the total soil-depleting acreage allotment.

ANOTHER provision enables localities and individual farmers in designated areas to achieve greater conservation by providing that on any farm where at least half of the cropland and orchard land is devoted to perennial legumes or grasses, a farmer may earn as much as half, but not more than \$50, of his soil-building allowance by carrying out locally adapted soil-building practices which are recommended by local committeemen.

Other aids directed toward more conservation include provision for making deductions from soil-building payments if farmers fail to maintain practices established under previous programs until full benefits to the soil have been realized, adoption of 10 new soil-building practices to meet the needs of specific areas, and changes in the range conservation program to permit ranchmen to carry out to a greater extent practices best adapted to their land.

ALABAMA has utilized the first of the three provisions which may be substituted for total soil-depleting allotments to create a State-wide experimental program known as the Alabama Plan. Through it, Alabama farmers are taking a long step toward a more permanent and stable system of farming. Minimum requirements of the plan include: (1) Growing each year an acreage of approved erosion-resisting and soil-conserving crops equal to 25 percent of the total cropland on the farm; (2) proper terracing to be done, within a 5-year period, on all cropland in the farm subject to erosion and on which there is no permanent vegetative cover; (3) establishment or maintenance during the next 5 years of at least 1 acre of perennial soil-conserving crops and 1 acre of permanent pasture for each 15 acres of cropland.

The second provision has been adopted in Arkansas, Florida, Georgia,

Louisiana, Mississippi, and South Carolina, and the third will be applicable in North Carolina. Through these and similar programs, farmers are coming to think and work in terms of a long-term plan rather than on a year-to-year basis.

THE principle of providing agricultural conservation materials and services in place of and in advance of program payments is being extended for the 1941 program. This will call for increased amounts of lime and superphosphate and more of the cooperation which has enabled farmers of the Southeast to draw upon farms in the Northwest for Austrian winter peas and hairy vetch seed for cover-crop plantings.

R. M. EVANS,

*Administrator,
Agricultural Adjustment
Administration.*

Crop Insurance

INCREASING popularity of the Federal Crop Insurance Program among the Nation's wheat growers has resulted in the writing of the largest number of contracts since all-risk insurance was first offered farmers in the autumn of 1938. During the sign-up period for winter wheat, which ended August 31, last, 375,403 contracts were written covering 9,551,310 acres. These contract holders paid 12,486,656 bushels of wheat or the cash equivalent in premiums for an insured total 1941 production of 98,680,541 bushels.

This record contrasts with a total of 379,042 contracts for both winter and spring wheat states during the 1940 crop year. With the winter wheat contracts on the 1941 crop almost equalling the total for both winter and spring during 1940, the spring wheat sign-up for the 1941 crop

is expected to add another 100,000 contracts to those already on the books, for a total contract volume approximating half a million.

THE next crop year—1941—also will mark the first year in which yield-and-loss data recorded under the crop insurance program will be worked into the rate structure. In this way, actual yields and losses will be accurately reflected in insurable yields and premiums payable by the insured. This data will be blended into the rate structure every second year after it is assembled. Thus, the results of the 1939 crop year will be worked into the actuarial data for 1941 while the 1940 data will be blended into the actuarial rates applying on the 1942 program.

The effect of inclusion of new data on the rate structure is about equally divided between increases and decreases for both insurable yields and rates. Generally, the effect of the

1939 yield data on the 1941 rate structure will be to increase by some hundredths of a bushel the premium to be paid by those growers in ratio to the crop loss they suffered that year. Broadly speaking, the same would hold true of their insurable yield. Generally the reverse would be true of those farmers who made good production records. In still other instances, no change at all might occur.

UNDER the 1940 program, contract holders were offered the opportunity for the first time of delaying settlement of their loss. In this way, they could take advantage of any increase in price and, also, risk a loss through price decreases. In either event, the Corporation's fiscal status was unchanged since its reserves were carried in actual wheat and it therefore was not subject to gain or loss through price fluctuations. The contract holders, however, were limited to not more than 90 days in deferring their settlements. Of more than 110,000 claims received by the Corporation, slightly more than one-third—32,999—elected to take deferred settlement. Of losses settled in the spring wheat area, 3,280 contract holders, exercising their right of deferred settlements, accepted payment of their losses during the period September 15 to October 15 when the price range was 77 cents to 85 cents a bushel. The price range was 66 cents to 77 cents a bushel for the

period August 15 to September 15, when only 468 contract holders exercised the settlement of their deferred claims.

IN 1940, as in 1939, crop conditions in certain areas were considerably below average, resulting in an excess of indemnity payments over premium collections. In 1940, roughly more than 21,000,000 bushels were paid out in indemnities compared with 14,685,290 bushels collected as premiums. The bulk of the indemnities was paid in four states—Texas, Oklahoma, Kansas, and Nebraska. These states alone accounted for most of the excess over premium collections. Losses were most severe in the big wheat areas where wheat was in most cases the only crop.

These losses occurred on large acreages, not on the small wheat farms. Had it not been for crop insurance, many of these farmers would have been without income in 1940. Their insurance contracts supplied them with at least 75 percent of an average crop. The total indemnity loss very probably would have been largely avoided or entirely eliminated had the losses to the crop been scattered instead of having been concentrated in one region.

LEROY K. SMITH,
*Manager,
Federal Crop
Insurance Corporation.*

Commodity Loans

THE Agricultural Adjustment Act of 1938, as amended, directs the Commodity Credit Corporation to make loans on cotton, wheat, and corn under the conditions of supply and price which now obtain, and these loans for the present marketing year have recently been announced. In addition to these mandatory loans, programs are in action for flue-cured

and dark tobacco, barley, rye, peanuts, prunes, raisins, gum rosin, and turpentine. Most of these programs are well under way, the corn loan being an exception.

The new loan on cotton was announced on August 9, 1940, at about \$1 per bale higher than last year, and with corresponding grade and staple and location differentials. Up to the middle of November, 1,650,000 bales had been pledged, with the average

rate slightly over 9½ cents per pound. It is anticipated that as much as 4 million bales may come under loan. Allowing for the liquidation of some loans during the coming months, there is a prospect of total C. C. C. stocks, both under loan and those owned by the Corporation, approximating 12 million bales on August 1, 1941.

AS FOR grains, some 250 million bushels of wheat had been pledged by mid-November under the new loan, at an average rate of about 72 cents per bushel. Some of this wheat will certainly be redeemed as the marketing season progresses, and loan stocks July 1, 1941 are expected to be about 200 million bushels. The situation in corn is quite different. The marketing season began October 1, 1940 with 475 million bushels under loan or owned by the Commodity Credit Corporation. The high yields this year, coupled with somewhat smaller livestock numbers to be fed, and larger supplies of other feed grains and roughage, are expected to result in further accumulation of corn under loan during the coming year. The new loan has just been announced at 61 cents per bushel, and it would not be surprising if 250 million bushels were pledged, in addition to the 425 million bushels of old corn which will probably be under loan or owned when the

resealing program is completed. The end of the marketing year may find 600 million bushels of corn under loan and owned by the Commodity Credit Corporation. Financing loans to allow the gradual marketing by producers have also been made available on barley and rye. Only some 5 million bushels of barley and less than 3 million bushels of rye have so far come under loan. It is expected that these loans will be completely liquidated during the marketing season.

A LOAN and purchase program on flue-cured tobacco is in operation similar to that effected last year to offset the situation caused by the withdrawal of British buyers. Nearly 300 million pounds from last year's and this year's crop are now owned by the Commodity Credit Corporation and it is expected that 100 million pounds more will come under the current program in the next few months.

A peanut loan to supplement a diversion program of the Surplus Marketing Administration is now in operation similar to the programs of the last two years, and dark tobacco, prune and raisin loans are also in operation.

CARL B. ROBBINS,
*President, Commodity Credit
Corporation.*

Marketing Farm Products

SURPLUS removal and marketing agreement programs are being extended during the current fiscal year to assist farmers in dealing more effectively with agricultural marketing problems complicated by war in Europe. The surplus removal programs are designed to encourage increased domestic consumption and to develop wider market outlets for

farm products. Marketing agreement programs seek to stabilize markets and improve returns to producers by establishing more orderly selling conditions. These measures for raising farm income are administered by the Surplus Marketing Administration.

The food and cotton stamp plans, the school lunch program, and the low-cost milk program are moving increasing quantities of farm products into consumption among needy families. Continuing are the programs for direct purchase and distribution of

surplus commodities, programs for diverting surpluses to byproducts and to develop new uses and new outlets, and programs for encouraging exports, primarily of cotton goods and of wheat and wheat flour to certain destinations.

For the current fiscal year ending June 30, 1941, Congress made available slightly more than 235 million dollars for use in carrying out the programs to encourage consumption and expand domestic and export market outlets for agricultural surpluses. The money appropriated for these authorized uses in the previous year approximated 205 million dollars.

THE Food Stamp Plan, started in May 1939, has been extended gradually throughout the country. Where this plan is in operation, increased buying power in the form of blue-colored stamps is placed in the hands of families eligible for public aid. These blue stamps are exchanged at local stores for foodstuffs officially listed as being in surplus. In order to obtain the free blue stamps, participants are in general required to buy specified amounts of orange-colored stamps to be used in the purchase of any food product. This requirement assures the continuance of normal expenditures for food. The blue stamps given with the orange-colored stamps bought make possible a 50 percent increase in food buying power which is directed at moving designated agricultural surpluses into consumption through regular trade channels. Instead of the 5 cents a meal, which is about the average they have been spending, persons taking part in the plan have at least 7½ cents for each meal.

By November 15, 1940, the Food Stamp Plan had been extended to 226 areas, and was in operation in 190 of these areas. About 2,500,000 persons were taking part in the plan, and new buying power at the rate of \$5,000,000 a month was being spent for officially listed surplus foods at

local stores in these areas. Participants in the plan have recently been spending approximately 14 percent of their blue stamps for butter; 14 percent for eggs; 17 percent for flour, rice, and other cereal products; 12 percent for vegetables; 13 percent for fruits; and 30 percent for lard and pork products.

It is expected that later in the winter the Food Stamp Plan will have been extended to approximately 250 areas and will be serving about 5,000,000 needy persons. New buying power at the rate of \$10,000,000 a month will then be made available for the purchase of listed surplus foods.

THE general operating principles of the Food Stamp Plan are followed in the Cotton Stamp Plan. Under the plan for cotton, eligible persons have the opportunity of buying green-colored stamps in the same approximate amount that they formerly spent for clothing and household goods made from cotton. Minimum and maximum purchase rates are fixed and within those limits, for every dollar's worth of green-colored stamps bought, a dollar's worth of brown-colored stamps is given free. Both stamps are good in any retail store in the areas where the plan operates, in exchange for any product made entirely from American cotton and manufactured in this country.

Started in May 1940, the Cotton Stamp Plan is being carried out on an experimental basis. By the middle of November it had been extended for testing in 11 areas and operations were under way in 8 of these areas. While additional areas are to be designated for the Cotton Stamp Plan during the current fiscal year, extension of the plan must be gradual until its value in moving increased quantities of cotton into consumption is firmly established.

AN increasingly important outlet for surpluses of foodstuffs is being provided by the school lunch

program for undernourished children. This activity depends largely on the cooperation and initiative of local civic, fraternal, educational, and welfare organizations. These groups assume the responsibility of operating the school lunch program in their respective localities. Surplus foods bought by the Surplus Marketing Administration and shipped to State welfare agencies for distribution to the needy are made available for use in the school lunches. Foods needed in addition to the surplus commodities are bought or otherwise obtained by the local sponsoring groups in order to provide the school children with well-balanced noon meals.

The school lunch program is being expanded materially. The objective for the current year is to reach 6 million undernourished children with the lunches made in whole or in part from surplus commodities. Last year about half this number of children were served in the peak month.

UNDER the direct purchase and distribution programs, a wide range of surplus farm products has been made available for distribution by State welfare agencies to public aid families and for use in the school lunches. During the last fiscal year more than 3,000,000,000 pounds of surpluses of over 40 agricultural products were bought under the direct purchase activities. This involved a total expenditure slightly in excess of 117 million dollars.

Direct purchases of agricultural surpluses are made as need arises for improving marketing conditions for individual commodities. So far in the current fiscal year heaviest purchases have been made of potatoes. Other commodities bought in considerable volume included cotton, apples, pears, peaches, eggs, and various vegetables. Approximately 25 million dollars had been encumbered in these purchase operations during the first 4 months of the fiscal year.

AN opportunity for needy families to increase their consumption of milk is afforded by the low-cost milk programs operating in Boston, Chicago, Washington, New Orleans, and New York City. These programs supplement operations under Federal marketing agreement programs regulating the handling of milk in the respective markets. They are made possible by a Federal subsidy payment to handlers and a special price to producers for the milk that is sold for use by eligible families at about 5 cents per quart.

The low-cost milk programs bring into fluid consumption surplus milk which otherwise would be used for manufacturing purposes at lower prices to farmers. Under the program in Chicago, needy families are consuming 100,000 quarts of milk daily, while 65,000 quarts a day are being bought in Boston, 10,000 daily in New Orleans, and about 3,000 quarts daily in Washington. In New York City, milk is being made available to nearly 210,000 school children at a penny a half pint. This phase of the low-cost milk program was started during the middle of October and will continue for a test period which ends December 31. Getting under way is a plan for encouraging the consumption of fluid milk among 92,000 New York City public aid families in which there are children under 16 years of age. Further extension of low-cost milk programs to other marketing areas is contemplated.

NEW uses and wider outlets for agricultural surpluses are being encouraged for a number of farm products. During the current fiscal year, new uses being developed include those for making cotton bale covers, the use of cotton in the manufacture of insulation material, and the use of cotton in making writing paper. Surplus peanuts are being diverted to oil and other byproducts, and the manufacture of starch is being en-

couraged through the diversion of surplus potatoes from regular trade channels. Surplus walnuts are being diverted to the shelling trade. Wider market outlets are being developed through a program for winter pears. Another program is encouraging sales of Puerto Rican Coffee in continental United States markets.

EXPORT subsidy programs are operating on a more or less limited basis largely because of unsettled world conditions. One program is encouraging sales of cotton products to foreign countries. Exports of wheat and wheat flour are being assisted through another program which now applies to exports of wheat from Pacific coast ports to the Philippines or to European destinations, and to wheat flour from that area to the Philippines, and from all parts of the continental United States to any country or place in the Americas and adjacent islands, except Puerto Rico, Alaska, and the Canal Zone, and to islands east of the Americas lying on or west of 40° west longitude.

MARKETING agreement programs are continuing to play an important part in stabilizing selling conditions for a wide range of agricultural commodities and in improving returns to producers. Altogether, 46 programs are in effect, 29 for milk and dairy products, and 17 for fruits, vegetables, and other crops. During the last fiscal year, the farm value of commodities sold under marketing agreement programs exceeded 400 million dollars.

Additional marketing agreement programs are expected to become effective during the course of the current fiscal year. At the request of industry groups, preliminary steps are under way for the development of these new programs for a few fluid milk markets and for certain crops grown in concentrated producing areas. Operations under marketing agreement programs will continue to be supplemented by surplus removal activities.

PHILIP F. MAGUIRE,
Assistant Administrator, Sur-
plus Marketing Administration.

United States: Exports and Imports of Specified Agricultural Commodities,
September-October and October 1939 and 1940 ¹

Commodities	Unit	September-October		October	
		1939	1940	1939	1940
Exports:					
Pork:					
Cured pork ²	Lb.....	<i>Thousands</i> 7,537	<i>Thousands</i> 2,247	<i>Thousands</i> 3,080	<i>Thousands</i> 1,086
Other pork ³	Lb.....	8,226	5,485	3,520	2,749
Total pork.....	Lb.....	15,763	7,732	6,609	3,835
Lard, including neutral.....	Lb.....	43,785	20,154	19,091	10,198
Wheat, including flour.....	Bu.....	10,304	7,475	4,629	4,431
Apples, fresh ⁴	Bu.....	1,014	221	666	144
Pears, fresh.....	Lb.....	38,443	6,196	23,916	3,579
Tobacco, leaf.....	Lb.....	70,850	14,799	26,604	8,406
Cotton, excluding linters (500 lb.).....	Bale.....	1,626	303	934	207
Imports:					
Cattle.....	No.....	82	94	61	64
Beef, canned, including corned.....	Lb.....	21,480	7,422	8,425	3,405
Hides and skins ⁵	Lb.....	45,290	57,564	21,173	29,551
Barley malt.....	Lb.....	14,278	6,287	7,214	3,790
Sugar, cane (2,000 lb.).....	Ton.....	625	391	210	192
Flaxseed.....	Bu.....	1,326	728	875	704
Tobacco, leaf.....	Lb.....	10,635	11,356	5,421	5,856
Wool, excluding free in bond for use in carpets, etc.	Lb.....	21,860	41,219	9,916	25,862

¹ Corrected to November 25, 1940.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled or salted, and canned pork.

⁴ Includes baskets, boxes, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records, Bureau of Foreign and Domestic Commerce.

Onions: \$18,000,000 Industry

ANOTHER agricultural industry that yields to producers an annual money return in eight figures is the production of onions. The onion industry has doubled within the last 20 years. It expanded from approximately 54 thousand acres and a crop of 817 million pounds in 1919 to 108 thousand acres and a crop of nearly 1,600 million pounds in 1940. The value of the crop in the 10 years from 1928 to 1937 averaged nearly 18 million dollars.

The onion was one of the earliest of crops produced in the United States, but only in the last 40 to 50 years has it been of commercial importance in this country. At first, the production of onions was confined to the New England States, but when the vast muck areas of the Great Lakes and other regions were drained and brought under cultivation, the onion became one of our important market-garden and truck crops. Today, the ten States leading in total production are Texas, Michigan, New York, California, Indiana, Massachusetts, New Jersey, Ohio, Colorado, and Minnesota.

The production of creole onions is confined chiefly to the section around New Orleans. Southwestern Texas and California contribute the greater part of the important Bermuda onion crop, with Colorado, Idaho, Utah, Nevada, Washington, and Oregon representing the centers of growth for the sweet Spanish onion. There are many local areas in the United States where onions are being grown in considerable quantities for the market and the production of several closely related crops such as chives, shallot, leek, and garlic has been developed extensively, especially in connection with market gardens near the large cities.

COMMERCIALLY, the onion crop is classed as "early," "intermediate," and "late," according to the marketing period. The principal marketing seasons are for the early crop, April and May; for the intermediate crop, June and July; and for the late crop, August to March. Large quantities of onions are sold and shipped direct from the fields where they are grown, but a part of the crop is held in temporary storage until late autumn or early winter. Onions shrink considerably while in storage, however, and must be regraded before being placed on the market. During recent years, the winter storage of onions has become of great importance, and the finest stock is held for late-winter deliveries. Most of the storage onions are disposed of before the crop of Bermuda onions comes on the market in April and May.

ONIONS are an intensive crop, their production involving considerable investment in land, fertilizer, and labor. But they yield a relatively high return per acre and repeated croppings or very short rotations are the common practice. The best Bermuda-onion farms are valued at \$300 to \$500 an acre and yields of 400 to 600 bushels per acre are not uncommon. Prices received by the growers vary considerably from year to year. A shortage in supply usually results in a more than proportionate increase in price, whereas a crop surplus usually causes a more than proportionate decrease in price. For this reason, there are often wide fluctuations in onion prices from year to year. The present acreage and production of onions in the United States are estimated to be about equal to market demands.

—C. ALPHONSO SMITH.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1925-39=100) ¹	Income of industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	Wholesale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in &—				
					Living	Production	Living and production		
1925	91	98	101	151	164	147	157	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	158	147	153	180	281
1930	91	88	96	126	148	140	145	167	277
1931	75	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	76	96	109	106	109	85	187
1934	75	61	78	100	122	125	123	95	178
1935	87	69	80	117	124	126	125	103	180
1936	103	80	81	118	122	126	124	111	182
1937	113	94	84	126	126	135	130	126	187
1938	88	73	82	115	122	124	122	124	186
1939	108	83	82	113	120	122	121	124	190
1939—November	124	93	82	116	—	—	122	—	—
December	126	93	82	116	121	124	122	—	—
1940—January	122	93	82	116	—	—	122	119	—
February	116	89	82	115	—	—	122	—	—
March	112	87	82	114	121	125	123	—	—
April	111	86	82	115	—	—	123	124	—
May	114	87	82	114	—	—	123	—	—
June	121	89	82	113	121	125	123	—	—
July	121	91	82	113	—	—	122	129	—
August	121	96	82	113	—	—	122	—	—
September	125	97	82	114	121	123	122	—	—
October	128	99	82	115	—	—	122	129	—
November ⁷	—	—	—	115	—	—	122	—	—

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	
1925	157	177	172	153	140	153	163	156
1926	131	122	136	145	147	152	159	145
1927	128	128	144	121	140	155	144	139
1928	120	152	176	159	151	158	153	149
1929	120	144	141	149	156	157	162	146
1930	100	102	162	140	138	137	129	126
1931	68	63	98	117	92	108	100	87
1932	44	47	52	102	68	83	82	65
1933	62	64	74	105	60	82	76	70
1934	93	99	100	103	98	96	89	73
1935	108	101	91	125	118	108	117	108
1936	108	100	100	111	121	119	115	114
1937	126	95	122	123	132	124	111	121
1938	74	79	78	101	114	109	106	95
1939	72	72	77	105	110	104	94	92
1939—November	79	75	66	123	107	117	117	97
December	87	82	65	96	101	118	97	96
1940—January	90	85	66	117	103	119	91	99
February	91	86	76	168	101	118	96	101
March	92	85	73	128	102	114	83	97
April	96	85	81	145	104	110	82	98
May	92	83	88	138	108	106	84	98
June	83	81	104	134	102	104	81	95
July	78	80	89	98	110	105	88	95
August	76	77	79	112	110	109	90	98
September	77	76	73	118	114	111	104	97
October	80	78	79	99	112	116	112	99
November	83	79	71	93	112	121	120	99

¹ Federal Reserve Board, adjusted for seasonal variation. Revised August 1940.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 88.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914. ⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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PRICES OF FARM PRODUCTS average the highest since 1937. But farmers—except in the livestock industries—have little to sell at this time of year, and cash farm income in February is usually the smallest for the year. Meanwhile, farmers plan their 1941 production of cash and feed crops, and the prospects are that costs of production will be higher this year. Already, farmers are having to pay higher wages to hired hands. And they have been employing more hired hands this winter than last. * * * Domestic consumer demand continues to improve, especially for farm commodities produced practically entirely for home consumption. Domestic consumption of cotton also has increased, but of course not enough to make up for the loss of export markets. More tobacco will probably be consumed in the United States this year, but here also not enough to offset the loss of export markets. * * * Total cash farm income is expected to increase this year, but in smaller proportion than the increase in industrial income. Most of the increase will go to the producers of domestic as contrasted with export farm products.

Commodity Reviews

DEMAND: Better

DOMESTIC demand for farm products continues to improve. The general index of prices received by farmers is the highest since 1937—this despite the high record production of farm commodities during the past year and the virtual loss of export markets. The effect of improving domestic demand has been particularly manifested in prices of meat animals, dairy products, poultry products, and apples.

Industrial activity may not rise by the usual seasonal amount in the next few months, but the actual rate of operations is expected to remain high enough to maintain the improved domestic demand for farm products. Later in the year a further substantial increase in industrial output is expected, largely because of the national defense and related programs.

Defense, factory, cantonment, and other building programs already are furnishing employment—directly and indirectly—to an increasing number of workers. These preparatory programs will gradually become subordinate to the output of military equipment, tanks, guns, airplanes, and munitions, as new productive facilities become available. Industrial activity and consumer income probably will be stimulated even more by the actual production of war materials than by the building and equipping of plants.

Some idea of the probable future effect of defense activities may be had from the increase in defense expenditures which will be necessary if intentions, as set forth in the President's budget message to Congress, are to be realized. To reach minimum budget estimates, defense expenditures will have to approximate 900 million dollars a month in the fiscal year to begin next July, as compared with about 560 million in January of this

year and 132 million dollars in January a year ago. Actually, the rate of increase in expenditures is likely to be limited more by the inability to produce the needed products than by the amount of funds available.

The prospective increases in non-agricultural employment and consumer income in 1941 may result in the largest cash farm income since 1930. However, the loss of export markets will prevent farm income from rising as much as might otherwise be expected in relation to total national income. The gain in farm purchasing power will be limited also by the rising prices of goods and services bought by farmers.

P. H. BOLLINGER.

INCOME: Maintained

Farm cash income will probably be about the same in the first quarter of this year as last, even though the volume of farm marketings is smaller. Much of the 1940 cotton and wheat crops has already been sold or placed under Government loan, and hog marketings from the 1940 spring pig crop were unusually large during the last quarter of 1940. But the smaller farm marketings of crops and livestock during the first quarter of 1941 compared with 1940 may be offset by higher prices.

Total cash farm income from marketings and Government payments totaled 9,094 million dollars for the full year of 1940, compared with 8,518 million dollars in 1939. Income from crops marketed or put under loan totaled 3,504 million dollars in 1940, compared with 3,238 million in 1939; income from livestock and livestock products totaled 4,821 million as compared with 4,473 million in 1939.

All major groups of crops except tobacco shared in the increase in

income last year, and all groups of livestock shared in the gain in that division. Returns from grains and cotton showed the greatest percentage increases among the crops. Income from meat animals and dairy products was substantially higher than in 1939, and income from poultry and eggs recorded a slight increase. Government payments totaled 766 million dollars in 1940, compared with 807 million dollars in 1939.

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
December:			
1940.....	767	70	837
1939.....	710	91	801
1938.....	639	39	678
1937.....	729	8	737
January-December:			
1940.....	8,328	766	9,094
1939.....	7,711	807	8,518
1938.....	7,000	482	8,082
1937.....	8,744	367	9,111

PRICES: Higher

The average of prices of farm products in mid-January was the highest since November 1937. The index of

prices received by farmers was 104 percent of the 1910-14 average, but the index of prices paid by farmers was 123 percent of the base period. The ratio of prices received to prices paid was 85 percent of the pre-World War base period of 100. This compares with 83 in December, and with 81 in January last year.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
January.....	99	122	81
February.....	101	122	83
March.....	97	123	79
April.....	98	123	80
May.....	98	123	80
June.....	95	123	77
July.....	95	122	78
August.....	96	122	79
September.....	97	122	80
October.....	99	122	81
November.....	99	122	81
December.....	101	122	83
1941			
January.....	104	123	85

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	January 1910-14	January 1940	December 1940	January 1941	Parity price, January 1941
Cotton, lb.....	cents.. 12.4	12.2	10.1	9.33	9.45	15.87
Corn, bu.....	do. 64.2	58.9	53.2	54.5	56.0	82.2
Wheat, bu.....	do. 88.4	88.4	84.5	71.5	73.0	113.2
Hay, ton.....	dollars.. 11.87	11.87	7.90	7.53	7.78	15.19
Potatoes, bu. ¹	cents.. 69.7	64.2	74.0	54.9	54.6	87.6
Oats, bu.....	do. 39.9	39.0	36.3	32.3	33.3	51.1
Rice, bu.....	do. 81.3		72.5	76.3	87.9	104.1
Tobacco, lb. ²	do. 22.9		11.4	12.1	11.7	22.4
Flue-cured, types 11-14.....	do. 22.2		17.3	17.3	15.5	21.8
Burley, type 31.....	do. .96	1.00	.73	.86	.90	1.23
Apples, bu.....	dollars.. 5.21	5.04	6.94	7.56	8.09	6.67
Beef cattle, cwt.....	do. 7.22	7.03	5.18	5.59	7.26	9.24
Hogs, cwt.....	cents.. 11.4	10.8	12.0	13.0	13.7	14.6
Chickens, lb.....	do. 21.5	28.0	18.3	26.8	19.7	³ 29.9
Eggs, doz.....	do. 26.3	29.2	30.0	34.8	31.1	³ 35.6
Butterfat, lb.....	do. 18.3	18.5	28.1	31.2	31.3	23.4
Wool, lb.....	dollars.. 6.75	6.78	8.95	9.01	9.70	5.04
Veal calves, cwt.....	do. 5.87	5.79	7.57	7.88	8.34	7.61
Lambs, cwt.....	do. 136.60	133.70	78.30	69.10	70.20	174.80
Horses, each.....						

¹ Post-war base.

² 1934-38 base.

³ Adjusted for seasonality.

Principal groups of farm products selling higher this January than last included fruits, meat animals, dairy products, and chickens and eggs. Groups selling lower included grain, cotton and cottonseed, and truck crops. Largest gains during the last month of record were in prices of meat animals. Prices of hogs went up 30 percent during this period. Largest declines were in prices of eggs and dairy products.

FARM WAGES: Up

Farmers have been paying higher wages this winter than last, as the competitive demand for workers in industry has increased. Wages of day and month farm workers combined on January 1 were 124 percent of the 1910-14 average, as compared with 119 percent at the same time a year earlier. January figures showed more hired workers on farms this winter than last. The ratio of prices received by farmers for their products to farm wage rates was 81 in January this year, compared with 83 a year earlier. The period 1910-14 equals 100.

COTTON: Prices Up

Prices of cotton average only slightly lower than at this time last year. Recent gains carried spot prices still further above the Government loan rate; nevertheless the quantity of the 1940 crop going into the loan continued to increase. By the end of January approximately 3 million bales of the 1940 crop were under Government loan, in addition to about 8 million bales from preceding years.

Increasing domestic mill consumption has been an important stimulant to cotton prices, counteracting some of the adverse effects of a shrinking volume of exports. Exports to date this year have been the smallest since 1868. At the current rate of exports the volume of shipments for the full

year 1940-41 will be little more than a million bales. This would put the business back to the early days of the cotton industry in this country.

Domestic mill consumption is expected to continue large during the next few months, since mills are well booked in advance. Mill activity in England has been little affected by the air raids, but in Japan the output of mills has been greatly restricted.

British mills have been working on large Government orders and a fairly active demand for textiles from the Dominions and South America.

WHEAT: Lower

Wheat has been selling lower this winter than last, reflecting a somewhat larger total supply, a poor export demand, and prospects for another good winter wheat crop to be harvested next summer. A stabilizing factor, of course, has been the Government loan, which has limited the supply of wheat in commercial channels.

The Government had about 290 million bushels of wheat under loan on January 1—280 million bushels of the 1940 crop, plus 10 million of the 1939 crop. Of the total, about 230 million bushels were in warehouses and the remainder on farms. Warehouse loans, which were made for a period of 8 months, or not later than April 30, begin to expire this month.

It is not expected, however, that markets will be oversupplied, because if prices are not above loan values plus costs at the maturity of the loans the Government will take delivery of the wheat. The Commodity Credit Corporation has announced that insofar as practicable it will not sell any 1940 crop wheat that is in good condition, except at prices at least at loan values plus charges. On 1940 farm-stored grain an extension beyond the original loan period of 10 months is available in areas where it is known the grain will store without deterioration.

FLAXSEED: Expansion

United States production of flaxseed has increased greatly in recent years. Total was 31.1 million bushels in 1940, compared with 20.2 million in 1939 and with 10.9 million average for the 10 years 1929-38. Acreage has been increased both within and outside the normal flax-producing areas in this country. Production in California and Arizona, mostly on irrigated land, has shown a sharp upward trend in recent years, and in 1940 accounted for nearly 10 percent of total United States production. The indicated acreage for 1941 points to a 52 percent increase in California and a 15 percent increase in Arizona.

The United States has been on a net importing basis for flaxseed for more than 30 years. Imports in recent years, principally from Argentina and Uruguay, have averaged about 15 million bushels annually. With the large supply now available from domestic sources, imports in the current marketing year may total no more than a third the usual quantity, even though domestic crushings may be somewhat larger this season than last.

FEED: Lower Priced

Feed grains (except corn) have been lower priced this winter, reflecting the large supply available for the reduced number of animals on farms. Corn has been higher priced, supported by the Government loans. The 1940 corn crop was of lower quality than the 1939 crop; consequently, there has been a much wider spread between prices of the better and the lower grades.

Stocks of corn on January 1 totaled 2.0 billion bushels. Of this, about 473 million bushels were under Government loan or ownership. Stocks on the same date a year earlier were about 50 million bushels larger, and of the total only 270 million bushels were held by the Government. Less corn is being fed this season (principally on account of the smaller number

of hogs), and the carry-over on October 1 next will probably be the largest on record.

CATTLE: Increase

An increase in marketings of fed cattle this spring and summer as compared with the like period in 1940 is indicated by an 11-percent increase in the number of cattle on feed this January 1 compared with a year earlier. Meanwhile, consumer demand for meats continues to improve and the prospect is that cattle prices will be higher in the first half of 1941 than in the same period of 1940. The number of cattle on feed this January 1 was close to the largest on record for that time of year.

Usually there is a seasonal decline in cattle prices in late summer and fall. Available information suggests that this year the peak in marketings of well-finished fed cattle may not occur until September or later and that marketings may continue relatively large throughout the fall months. Under these circumstances, it is possible that the improvement in cattle prices relative to a year earlier will be less pronounced in the fall and winter than in the spring and summer of 1941.

Inspected cattle slaughter during 1940 totaled about 3 percent larger than in 1939. The increase over 1939 appears to have been largely in steers, since farmers and ranchers continued to hold back breeding stock to increase herds.

HOGS: Higher

Higher prices for hogs are seen in the current supply and demand situation. Prices have advanced sharply from the low figures of last fall, reflecting a sharp decrease in marketings of hogs currently and in prospect. The 1940 pig crop totaled 77.0 million head, as compared with the high record crop of 85.9 million in 1939, and a sharp reduction in the spring pig crop this year compared with last

was indicated by farmers' reports in December.

Continued improvement in the hog-corn price ratio this month would suggest that the decrease in the number of sows farrowed this spring may be somewhat less than the 14 percent indicated by farmers in December. In any case, it is likely that hog prices relative to corn prices will continue to advance to the extent that the ratio will be favorable for hog production this spring and summer. This would forecast an increase in the 1941 fall pig crop as compared with the 1940 fall crop.

Total production of pigs—spring and fall crops combined—in 1941 will probably be smaller than production in 1940. So much for current and prospective production and marketings. Add to this a considerable improvement in domestic demand for pork and lard this year and the total spells higher prices, even though the outlook for exports of pork and lard continues poor.

LAMBS: Increase

A moderate increase in market supplies of lambs is expected during the next few months as contrasted with the like period in 1940. But the increased supply will be favored by an improved consumer demand for meats, and prices may be higher than in 1940. The larger supply is indicated by an increase of 6 percent in number of sheep and lambs on feed this January 1 compared with last. The number on feed this winter was the largest on record.

Most of the increase was in the Corn Belt States, although the total in States outside the Corn Belt also was somewhat larger. Increases were reported in seven Corn Belt States, and decreases in four. Largest increases were in Iowa and Kansas; largest decrease, in Nebraska. In the western sheep States (including Texas, Oklahoma, and North Dakota) the number of lambs on feed was a little larger this January 1 than last.

A decrease of 10 percent in Colorado was more than offset by increases in eight other Western States. The number on feed in Colorado was the smallest since 1927. * * * Weather conditions up to January 1 in most areas were less favorable than during the comparable period in 1939.

WOOL: Higher

Outlook is for a higher average of prices for the 1941 wool clip as compared with 1940. Principal factor is the continued heavy consumption of wool by mills to fill Government orders. A limiting one is the heavy volume of imports this season. Any advances in prices from January levels will probably be moderate, but prices will likely average higher this spring and summer than last.

Wool produced in Australia, New Zealand, and the Union of South Africa is under control of the British Government and is being sold at prices fixed by that Government. United States imports of wool have been large, but so has domestic consumption, and the United States carry-over of apparel wool into the 1941 season is likely to be relatively small. The carry-over on April 1 last, totaling 180 million pounds, grease basis, was the smallest in recent years.

The United States, Great Britain, and Japan are now the only important markets for wool exports from the Southern Hemisphere.

FRUITS: Higher

Prices of most fruits have averaged higher this winter than last in response to three important factors: smaller crops, improved consumer demand, and large purchases of fresh fruit by the Surplus Marketing Administration in an effort to offset the adverse effects of lost export markets. The spread in prices this season compared with last is likely to widen as consumer buying power increases. Apples es-

pecially have been in a strong price position.

Production estimates for oranges and grapefruit have been lowered since late fall, but the January 1 estimated total for these fruits was 4.7 million tons, as compared with 4.3 million tons last year. Auction prices of early and midseason Florida and California oranges were higher than a year ago in early January; prices of Texas grapefruit advanced, following reports of wind damage in that State.

TRUCK CROPS: Question

Average of truck crops in the winter vegetable producing areas of the South and in California are larger this season than last. Barring severe weather losses, market supplies should be considerably larger than in early 1940. Prices went up fast in January, however, following reports of heavy rains in these areas.

These rains retarded the development of some truck crops, but the much-needed moisture may prove beneficial in the long run so far as the production of crops is concerned. Favorable weather now will result in increased marketings and, of course, lower prices. For late winter and early spring the prospects are for larger crops of artichokes, snap beans, beets, carrots, cauliflower, eggplant, kale, lettuce, onions, peppers, spinach, and tomatoes this year than last. The supply of early cabbage, celery, and cucumbers probably will be slightly smaller.

Unless weather conditions are unfavorable, as they were last winter, prices during the early part of 1941 are likely to average much below those of early 1940.

POTATOES: Low Priced

An unusually large supply of potatoes plus prospects for larger early crops this season than last has been

a price deterrent this winter. Stocks on January 1 totaled about 119 million bushels, as compared with 104 million a year earlier and with 102 million average for the 10 years 1930-39. Reports have been that growers intended to plant a slightly larger acreage this season than last in the first section of early States,—north Florida, and the lower valley of Texas.

Different has been the situation as to sweetpotatoes, prices having advanced more than is usual, since marketings of the relatively short storage supplies have been correspondingly small. Storage holdings are much smaller than at this time last year, and a good level of prices is expected during the remainder of the marketing season. Another factor on the up side has been the improved consumer demand this winter.

DAIRY: Record

All former high records of production of milk and dairy products have been broken this winter. This situation is likely to continue, since there are large numbers of cows on farms and plenty of feed. Farm prices of dairy products have been the highest since 1937; farm income from dairying this year may be the largest in a decade.

Production of milk will increase sharply next month and by June may reach a peak higher than at any previous time in 17 years of record. The total of milk production in June will probably be close to 12 billion pounds. This would compare with 11.8 billion in 1940, with 11.5 billion in 1939, and 11.0 billion average for the 10 years 1929-38. This quantity does not appear excessive, in view of the good consumer demand for milk and dairy products.

Government and private agencies are engaged in many ways in trying to increase the use of milk by consumers. It is reported that 2-quart containers are now being used in 16 cities the

country over. Prices range from one-half to 3 cents less than for milk in single-quart containers. Some markets are using 4-quart containers.

POULTRY: Marketings

Latest reports indicate that farm marketings of poultry will be moderately smaller during the next few months, as contrasted with the same period last year, but that receipts of poultry at the principal markets may be about the same as in early 1940, since a heavy intermarket movement of storage poultry is expected. Storage stocks of poultry are the largest on record. The bulk of these stocks consists of turkeys, fowls, and roasters.

Farmers have been getting higher prices for chickens this winter than last, largely because of improved consumer demand. Chicken prices in general are expected to average higher than prices a year earlier during the next few months. * * * For the first time in nearly 2 years prices of turkeys have been higher than a year earlier. Prices of turkeys may continue higher throughout 1941, and it is not unlikely that production will be increased this year.

EGGS: Production

Production of eggs has been about the same this winter as last, a small reduction in December being followed by some increase in January, as indicated by marketings and out-of-storage movements. There were about 2 percent fewer layers on farms this January 1 than last, but in terms of egg production this difference could be canceled by a long spell of good weather. In any case, the feed-egg price ratio is expected to be more favorable during the next few months of heavy seasonal production this year than last. This would result in an increase in number of chickens raised this year.

(Production of eggs on farms in 1940 was the largest in 10 years. The total was 38,892 million eggs. Largest production on record was 39,067 million in 1930. The increase in production of eggs in recent years has been due mainly to increased production in the fall and winter months—November through February. Many commercial flocks now produce the largest proportion of their eggs during the winter months, when egg production generally is at its low point for the year and egg prices are highest.)

FRANK GEORGE.

Supplemental Cotton Program

A supplementary cotton program for voluntary reduction of cotton acreage below the 1941 national acreage allotment, and for increased consumption of cotton goods, to be brought about by compensating cotton farmers for their additional acreage reduction with cotton stamps which may be used to purchase cotton goods, was announced last month by Secretary Wickard.

The program is to be accompanied by an intensive campaign to encourage improved living standards through more gardens and food and feed produc-

tion for home consumption. It does not change in any way the basic conservation and parity programs already in effect under the AAA.

The program will be carried out by the Agricultural Adjustment Administration and the Surplus Marketing Administration. The AAA will administer the program in the States and counties and the SMA will provide and redeem up to 25 million dollars' worth of cotton stamps which farmers will receive for their voluntary reduction.

Farmers will receive stamps for planting less than their 1941 allotments

on their 1940 measured acreage, whichever is lower, at the rate of 10 cents a pound times the normal yield of the underplanted acreage, up to \$25 per family in the case of sharecroppers, tenants, and owner-operators. Owners of more than one farm or of a farm operated by more than one tenant may qualify for up to \$50 worth of the stamps, based upon their share of the crop.

The following is an example of how the new program would operate in the case of a farmer with a 10-acre allotment in 1941, who planted 10 acres in 1940, and who had a normal yield of 250 pounds per acre:

This farmer, if he planted within his acreage allotment of 10 acres, would receive full conservation and parity payments available under the program. However, if he wished to participate in the supplementary program, he could reduce his plantings by 1 acre, or have a total of 9 acres. For the acre reduced he would receive cotton stamps at the rate of 10 cents per pound for the 250 pound normal yield, or \$25 worth. He could then exchange the stamps at his local retail store for cotton goods. The merchant would redeem the stamps, at face value, from the Surplus Marketing Administration.

The Farmer's Share of the Food Dollar

THE farmer's share of consumer expenditures for domestic food products continued to increase through 1940. For a selected list of important food items, the farmer's share of the consumer's dollar rose from 40 cents in 1938 and 41 cents in 1939 to 42 cents in 1940. This rise in the farmer's share must be attributed in large part to a continued decline in the middleman's charges for marketing services, since there was no significant advance in retail food prices.

The marketing of food products involves a variety of middlemen's services required to transfer these products from the farmer to the consumer. These services include local assembly, transportation, storage, processing, and wholesale and retail distribution. Charges for these marketing services make up the total spread between the price paid by the consumer at retail and the price received by the farmer for equivalent quantities of farm products. In table 1 are shown data on prices and marketing margins for 58 important retail food items combined into a single group representing annual family purchases.

Interest never wanes in the consumer's food dollar. Everyone wants a slice of it. The farmer gets a share, and out of this portion he must pay the costs of production. Transportation agencies, processors, and distributors get a share—and they have expenses, too. Interest in the consumer's food dollar is especially keen just now to see that its buying power does not shrink unduly, and that the portions going to the various agencies of production and distribution are maintained in proper balance.

The portion of the consumer's food dollar going to each group has never been perfectly measured, but the Bureau of Agricultural Economics does make at least a rough separation by way of indicating the share the farmer gets—at one time as compared with another—and the portion going to the remaining groups. The latest analysis, covering the last 2 years against the statistical record of the preceding 15, is given in the accompanying article.—Ed.

IN 1940 the consumer paid \$314 for the list of 58 foods. Of this amount, \$182 was retained by middlemen to cover charges for their services, leaving

\$132 as payments to farmers for sales of food products. At the price levels ruling in 1940, the farmer received less for the sale of this group of products than he did in any of the 3 years 1913-15, preceding the first World War, while the consumer was obliged to pay substantially more for these foods at retail.

Table 1.—58 Foods Consumed Annually by a Typical Workingman's Family—Values at the Farm and at Retail, and the Marketing Margin

Year	Farm value	Retail value	Margin	Farm value as percentage of retail value
	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Percent</i>
1913.....	134	252	118	53
1914.....	137	258	121	53
1915.....	134	258	124	52
1916.....	155	285	130	54
1917.....	223	370	147	60
1918.....	245	424	179	58
1919.....	267	470	203	57
1920.....	272	514	242	53
1921.....	179	404	225	44
1929.....	195	415	220	47
1932.....	88	270	182	33
1937.....	160	353	193	45
1938.....	130	321	191	40
1939.....	126	311	185	41
1940.....	132	314	182	42

Source: Farm prices from the Agricultural Marketing Service; retail prices from U. S. Bureau of Labor Statistics.

At \$314 the consumer expenditure for 58 foods in 1940 was 1 percent higher than in 1939 and 2 percent below expenditures in 1938. This 1940 retail value was 22 percent higher than the expenditure of \$258 required for the same foods in 1915, nearly 40 percent below the record level of \$514 reached in 1920, and 16 percent above the depression level of \$270 in 1932.

During the 1920's, total charges for marketing services represented by the margin changed but little and were maintained at a level of about \$215. During the latter part of the decade of the 1930's the marketing margin was quite stable at near \$190. Through

the last 4 years, 1937 to 1940, the margin has been consistently declining, dropping from \$193 in 1937, \$191 in 1938, and \$185 in 1939, to \$182 in 1940. Marketing charges for 1940 reached the lowest level since the depression of the early 1930's, and were exceeded in all years but 2 since 1918. This decrease in middlemen's margins occurred in the face of increases in certain costs such as hourly wage rates.

A part of the contraction in margins which has occurred since 1935 may have resulted from a gradual elimination of additional charges designed to cover the processing taxes of 1933-36, which amounted to as much as \$11 on the family purchases of 58 foods.

With a decline of \$3 in the marketing margin and a rise of \$3 in retail value, the farm value of 58 foods rose by \$6, or 5 percent, from 1939 to 1940. The farm value was \$132 in 1940, slightly above the \$130 for 1938 but 18 percent below the \$160 received in 1937. Because of the relative inflexibility in charges for marketing services, variation in consumer expenditures for food at retail are passed back to the farmer in the form of relatively severe fluctuations in farm value.

IN table 2 the 58-food composite-value and margin series are shown on an index basis by months for the 2 years 1939-40. August 1939 is chosen as the base for these indexes so that they represent variations in level of prices and marketing charges from the level immediately preceding the European War. After the initial rise of 5 percent in retail value during the first month of the war, retail food prices have persisted at about the same level, dropping by 3 percent to January 1940 but never rising above September 1939, and even during the last months of 1940 no appreciable upward trend was evident. Charges for marketing services represented by the margin have averaged well below the pre-war level with irregular monthly variation.

The level of farm prices represented in farm value of 58 foods has been substantially higher than in August 1939, due in part to the level of retail prices but in large measure to the decline in the marketing margin. The position of the farmer continued to improve in the late months of 1940, the farm value in December of 1940 rising to 20 percent above August 1939. During late 1940 the farmers' share of the retail value showed a corresponding increase, reaching 45 percent in December.

In general, retail and farm price changes for individual items are similar to changes for the 58-food composite, the advance in farm prices being relatively greater than any increase in retail prices. After rising during the middle of 1940, the retail price per pound of white bread declined to 7.8 cents in December 1940. Prices of dairy products, of butter in particular, were higher in 1940 than in the corresponding months of 1939. The farm price of eggs more than kept pace with the retail price advance during the late months of 1940. In contrast to the stability in bread price, the retail price of white flour rose by 13 percent from 1939 to 4.3 cents per pound in 1940. The retail price of dry beans has retained a large part of the advance which occurred at the outbreak of the war, while the price paid to farmers lost most of the initial rise. Retail prices of all meat products, as a group, declined following the high point in September 1940 and at the end of the year were well below the September 1939 prices. Prices paid farmers for all livestock during 1940 averaged near 1939, with declines in hog prices offsetting increases in prices of cattle and lambs.

WAGE payments to labor constitute an important element in the costs of performing most marketing services. Compensation of employees amounts to nearly half of the total expenses of class I railways. In the

food-processing industries, wage payments make up from one-fourth to one-third of value added by manufacture. In wholesale and retail distribution the pay roll is about half the total operating expenses. Changes in hourly wage rates produce important changes in costs of marketing but may be partially or totally offset by increases in labor efficiency.

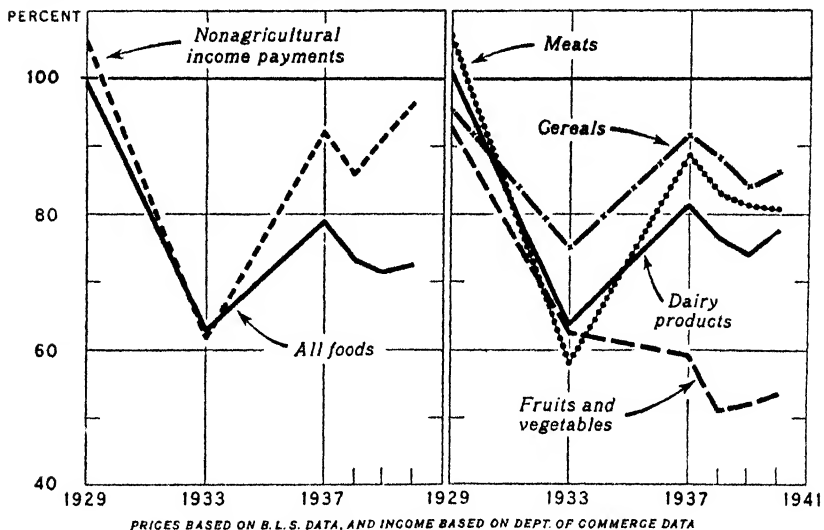
In table 3 are shown indexes of hourly wage rates for the last 6 years in occupations connected with marketing of food products. The dollar margin of 58 foods representing total marketing charges has been closely associated with changes in hourly earnings of all nonagricultural wage workers. During recent years, however, wage rates have increased while the

Table 2.—58 Foods Consumed Annually By a Typical Workingman's Family—Index Numbers by Months of Retail Value, Equivalent Farm Value, and Marketing Margin, January 1939 to December 1940

[August 1939 = 100]

Year and month	Farm value	Retail value	Margin	Farm value as percentage of retail value
				<i>Percent</i>
1939				
January.....	108	104	101	41
February.....	108	103	100	41
March.....	105	103	101	40
April.....	104	102	101	40
May.....	102	102	102	39
June.....	100	101	102	38
July.....	102	102	102	39
August.....	100	100	100	39
September.....	114	105	100	42
October.....	114	104	98	43
November.....	116	104	96	44
December.....	112	103	97	42
1940				
January.....	112	102	96	42
February.....	113	105	100	42
March.....	109	103	99	41
April.....	110	103	99	41
May.....	110	104	100	41
June.....	105	105	105	39
July.....	108	104	102	41
August.....	108	103	99	41
September.....	112	104	98	42
October.....	114	103	96	43
November.....	118	103	94	44
December.....	120	105	96	45

RETAIL PRICES OF IMPORTANT FOOD GROUPS AND NONAGRICULTURAL INCOME PAYMENTS, UNITED STATES, 1929-40 INDEX NUMBERS (1925-29=100)



marketing margin has declined. Table 3 shows that wage rates in various occupations have not increased with equal rapidity. The advance has been most pronounced in food manufactures, where hourly earnings rose 21 percent during the last 5 years, with most of the increase occurring from 1936 to 1937. For steam railways the total wage increase has been only half as great, most of that occurring from 1937 to 1938. In wholesale trade, wage increases have been substantial, but wages in retail trade have actually declined since 1937 and are at present only 4 percent above 1935.

Table 3.—Hourly Wage Rates—Index Numbers (1935=100)

Year	Steam rail-ways	Food manu-fac-tures	Whole-sale trade	Retail trade
1935.....	100	100	100	100
1936.....	101	102	103	100
1937.....	103	113	108	106
1938.....	109	117	108	104
1939.....	109	119	110	105
1940 ¹	110	121	114	104

¹ Preliminary estimate.

Source: U. S. Bureau of Labor Statistics and the Interstate Commerce Commission.

General wage increases and greater employment must increase the earnings of lower income families and thereby increase total expenditures for foods. Farmers can expect to gain from any general rise in wages which is not entirely offset by lowered employment and higher marketing costs.

Transportation costs constitute one of the important elements in the spread between farm and retail prices. Rail freight rates on agricultural products have changed little during the past three years, following the substantial increase of about 5 percent which occurred early in 1938, when the rise in hourly earnings of rail employees took place.

ANY reduction in marketing charges should benefit the consumer through reducing retail prices and improve the position of the farmer by increasing prices which he receives. Reduction of marketing costs could result from breaking up congestion and increasing efficiency at certain points in the marketing process. Improvement of terminal market facilities is a step in this direction.

Detailed study of price trends and marketing costs for food products will become increasingly imperative under the current defense program with its

expansion of industrial production and prospective increases in costs of consumers' goods.

R. O. BEEN.

Interstate Trade Barriers: A Proposal

THE removal of interstate trade barriers has become an important national issue. Farmers, dealers, and consumers throughout the country want to see our marketing laws and regulations overhauled in such a way as to permit free trade without sacrificing any of the legitimate purposes of regulation, such as the protection of public health, the prevention of the spread of insect pests and diseases, and the protection of highways from excessive damage. Many have asked the Bureau for concrete and specific suggestions for accomplishing such a revision of marketing laws and regulations.

There are some practical possibilities for eliminating the worst of the trade barriers in agriculture. State commissioners of agriculture with whom some of these possibilities were discussed in December were very interested. Most of the State legislatures are meeting this year, and many of the State commissioners of agriculture believe that if Federal and State officials could agree on a program there would be a real possibility of getting the necessary Federal and State legislation this year. Also, that inasmuch as trade barriers represent an obvious threat to our defense program, now is an opportune time to push legislation for freer interstate trade.

A comprehensive program for revising all marketing laws and regulations is being studied by an Interdepartmental Committee on Interstate Trade Barriers and by the Council of

A special report issued by the Bureau of Agricultural Economics in March 1939—*Barriers to Internal Trade in Farm Products*—called attention to the rapid growth of discriminatory laws and regulations which have the effect of interstate tariffs and embargoes. The report showed that such laws and regulations are interfering seriously with the free movement and sale of farm products, raising the cost of marketing, increasing prices of food and clothing to the consumer, and lowering the consumption of these products.

Studies by a number of Federal and State agencies have confirmed the Bureau's findings, and have brought to light the existence of many serious trade barriers which were not covered in the Bureau's report. * * * At the last sessions of the State Legislatures in 1939, many proposed additions to State barriers were blocked. At the current sessions (approximately 40 State legislatures meet this year) there is opportunity to repeal at least the worst of the trade barrier laws.

A program of Federal-State cooperation to deal with the "barrier" situation, patterned after existing arrangements for the grading, inspecting, and certifying of farm products, is proposed in the accompanying article.—Ed.

State Governments. Meanwhile, I should like to make one particular proposal which in my opinion would go far toward eliminating some of the most serious trade barriers affecting agricultural products. This proposal is made by me as an individual; it does

not commit the Bureau of Agricultural Economics nor the Department of Agriculture in any way. It is made here and now only in the hope that it will start some discussion out of which may grow a concrete program.

Briefly, my proposal is for a cooperative Federal and State program patterned fairly closely after the Federal-State grading and inspection programs.

UNTIL about 25 years ago, non-uniform grades for farm products presented many serious trade barrier problems. For example, wheat which had been inspected and certified as to grade in the producing State might not be acceptable in markets outside the State. Potatoes rated as No. 1 grade in one market might be called No. 2 in another market and sold there at a discount. During the past 25 years this situation has been improved greatly through a program developed and carried out jointly by the Federal and State Departments of Agriculture.

This program has accomplished two things: (1) It has brought about gradually more and more uniformity in the standards and grades used throughout the country; (2) it has provided an inspection service whose certificates of quality are accepted as passports in interstate commerce. A certificate showing that a carload of potatoes has been inspected and is up to the U. S. No. 1 standard is now accepted in any part of the country as an indication of the actual quality.

This standardization and certification service has virtually eliminated trade barriers that once existed because of differences in grading requirements and in inspection techniques for some of the principal agricultural products.

To be sure, there is still need for greater uniformity in the specifications of grades for some products, such as eggs. And there is a very decided need for greater uniformity in requirements concerning marking, packing, and containers.

(One State recently tried to enforce a law requiring that farm products *transported through* the State be marked according to the State law. Requirements in this State are different from those in other States and also different from the requirements of the Federal Government. It is easy to see how interstate commerce would be disrupted if each State tried to regulate the marking and labeling not only of products sold in that State, but also of products transported through that State.)

OUR studies have shown that sanitary laws and regulations have set up a number of monopolistic and discriminatory trade barriers which restrict milk and cream sheds, raise prices to consumers, raise costs to producers, and arbitrarily deny many dairymen the opportunity to sell their products in the most profitable market. There seem to be two basic troubles with milk inspection at the present time: (1) Lack of uniformity in sanitary requirements; (2) the refusal of cities and States to accept outside inspections. These are the same problems which have been met rather successfully in the case of grading.

We need greater uniformity in sanitary requirements, and we need a Federal-State inspection service which can grant a certificate that will serve as a passport by which milk and dairy products can move freely in interstate commerce. Some progress is being made toward greater uniformity in sanitary requirements. Recently 9 midwestern States have been working with the Council of State Governments to get greater uniformity within that region and to provide standard qualifications for dairy inspectors. The United States Public Health Service has been urging for several years the adoption of the so-called "standard milk ordinance."

These definitely are steps in the right direction. However, the worst trade barrier features of milk inspection will not be eliminated until cities and States accept the inspection certificates issued by competent authorities outside the State. This would not necessarily require the compulsory use of Federal grades nor Federal inspectors. Grades for milk and dairy products should be made more uniform, but they do not necessarily need to be the same all over the country. Inspectors might be appointed by States or cities as they now are, but some arrangement would have to be worked out whereby these inspectors could be licensed and supervised by some Federal agency. This would be similar to the present Federal-State program dealing with standards, grades, and inspection for quality.

EVERYONE seems to agree in principle that plant quarantines should be based solely upon known risks of spreading pests and diseases. Regional and national plant boards have made a good deal of progress by eliminating unnecessary quarantines which tend to act as trade barriers and by helping to standardize and unify inspection and certification procedures.

In addition to more uniform quarantine regulations it seems quite evident that we need some kind of reciprocal acceptance of inspections made by competent authorities in other States. This could be done by developing a cooperative Federal-State inspection service which could grant a certificate or passport acceptable in all parts of the country. This sort of arrangement has been discussed from time to time by nurserymen and by some of the plant boards, but no general agreement has as yet been reached.

There are many technical problems in connection with quarantines which I am not competent to discuss, but it does seem to me as an agricultural economist that grading, sanitary regulations, and quarantines can all be

handled by about the same type of cooperative Federal-State program and that in each case the main problem is to set up a competent inspection service which can grant certificates that will be accepted in any market in the country.

LICENSING and registration are, perhaps, a somewhat different problem, but these also might be handled by a program similar to that discussed above. Dealers of various kinds, doing business in more than one State or more than one city, are being required to register many times or to take out many licenses because a large number of the States and many cities each require dealers to register or to take out a license. In most cases fees are charged for registering and licensing. In many cases this is making it difficult for nurserymen, fertilizer companies, and similar dealers to do an interstate business. In some cases the city licenses required for trucking and peddling are so high as to shut out practically all outside competition with local merchants.

It is not the contention that all licensing and registration requirements are bad, nor that all were set up solely as trade barriers. Licensing and registration requirements are often perfectly legitimate, in some cases they are the only practical way of protecting the farmer and the general public from fraud and dishonest practices. Nevertheless, these requirements must be reasonable if we are to have an efficient marketing system. Perhaps the way out of this dilemma is to develop a Federal-State licensing system patterned after the Perishable Agricultural Commodities Act.

Under the P. A. C. Act fruit and vegetable shippers and dealers engaged in interstate commerce are required to have a Federal license. Some States require also that dealers conducting an intrastate business take out a State license. This system has proved effective in eliminating many unfair trade practices and safeguarding

both the farmers and consumers against fraud. From time to time there has been some talk about similar arrangements for licensing other middlemen—egg dealers, for example. If this system were expanded to include interstate dealers and shippers who handle all kinds of farm products, and if the States could supplement such a system by registering persons engaged in intrastate commerce in these products, we might be able to do away with many expensive, annoying, and overlapping requirements of individual States, counties, and cities.

A PROGRAM of the kind proposed here would go far toward eliminat-

ing the worst trade barrier features of grades and standards, sanitary inspection, quarantines, and registration and licensing. It would not take care of some other important trade barrier problems, such as discriminatory laws and regulations on alcoholic beverages, discriminatory taxes such as those imposed on margarine, nor discriminatory laws and regulations in the field of transportation. There probably is no one panacea which will solve the whole trade barrier problem. But I believe the proposed attack would help a great deal and would benefit the farmer, the dealer, and the consumer.

FREDERICK V. WAUGH.

Income by Types of Farming

A NEW approach to finding how various groups of farmers fare under different cost and price conditions is giving an unusually informative picture of farm income problems by type and size of farm. Applied to the Corn Belt, the measure shows a decided economic advantage of livestock systems of farming over cash-grain farming in all but 3 of the past 23 years (fig. 1). Analyses are now under way for the wheat and cotton areas, and similar studies of income in relation to a base period are planned for other regions of the country.

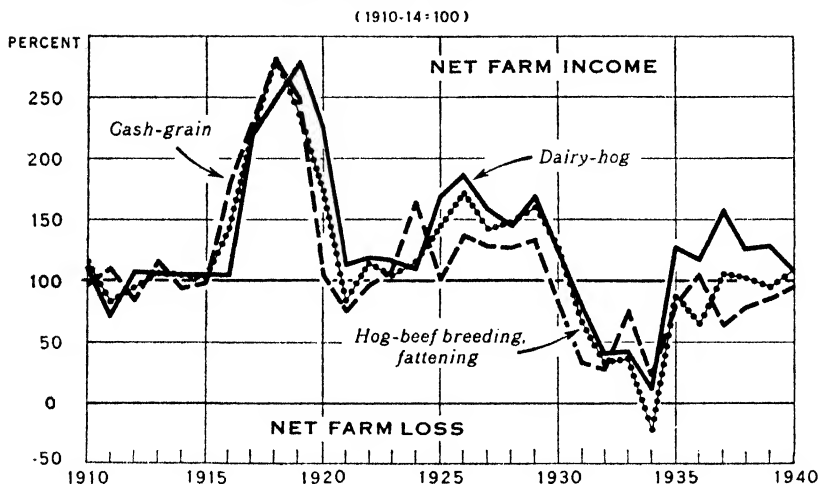
The index itself is designed to reflect as closely as possible the effects of changing conditions on each farmer. When the final results are available they will show how farmers having a given type and size of farm have fared under the crop, price, and cost conditions for each year in the past. They will also serve as a basis for indicating to these farmers the prospects for the future. The index may also be used to estimate for planning agencies and farmers the possible income effects of various agricultural programs on given types and sizes of farms.

THE organizations of three usual types of farms in the Corn Belt are shown in the accompanying table. Of these, the dairy-hog type has consistently held an advantage since 1918 over cash-grain farms and hog-beef breeding-fattening organizations. Cash-grain farms have the poorest income record during this period. In 2 years of drought (1924 and 1934) and 1 year of depression (1933), the dairy-hog type lost its advantage.

The reason for these momentary lapses is found in the conditions prevailing during these drought and depression years. For example, in 1934, cattle and sheep production was high and the prices of all livestock were comparatively low. Corn, oats, and hay production was low. Cash-grain farmers in such unusual situations are ordinarily in a better position than livestock farmers who have to feed out with high-priced feeds or sell on a distressed market. The cash-grain farmers meanwhile do not have to buy feeds; in fact, they are frequently able to sell at high prices their crops from the year before.

Good farm managers, however, do not gamble on an unusual year. They

FIG. 1. INDICES OF NET FARM INCOME OF CORN BELT FARMS BY TYPE OF FARM



plan for the long pull. Under such conditions, livestock farming has been relatively the most profitable over two decades. The implications of this fact reach far beyond the income of the farmer. For example, the national agricultural program is aimed toward soil-conserving systems of farming, systems like the livestock ones described here. Hay crops, small grains, rotation pasture, all fit into a livestock system of farming and into a national conservation program.

THE net incomes shown in figure 1 represent the amount of farm income available for personal expenditure and saving. They include products consumed on the farm, Government payments, carry-overs of products from one year to the next. Other factors affecting income have been accounted for, thus the income represents the amount available for the farm family each year.

How has this purchasing power varied? We know, of course, that high incomes accompanied by high prices of everything farm families must buy are no better than low incomes and low prices of commodities bought. Statistically, our question is: Has the index of farm income changed to the

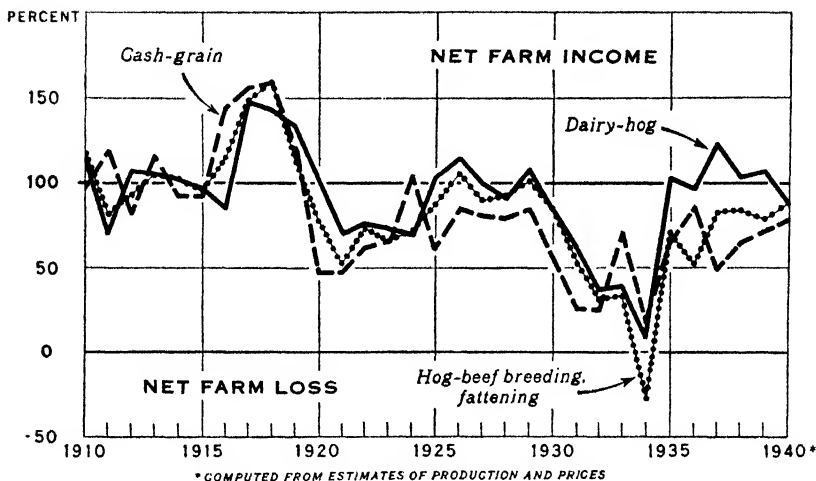
same extent as the index of the prices of commodities and services farmers

Organization of Corn Belt Farms by Type, 1937-39

Item	Type of farm		
	Hog-dairy	Cash grain	Hog-beef breeding, fattening
Acres per farm	118	181	196
Acres in crops	83	156	143
Percentage of farm cultivated	71	88	74
Acres in corn	28.7	77.8	52.0
Yield of corn	50.3	59.7	56.4
Acres small grain	24.0	53.9	37.1
Acres hay	14.4	8.4	25.0
Number of cows milked	7.7	4.1	4.6
Cwt. hogs sold	139	66	201
Cwt. cattle sold	30	24	98
Cwt. sheep sold	6.4	1.5	4.5
Proportion of gross income from various sources			
	Per-cent	Per-cent	Per-cent
Corn	45	45	4
Small grain	4	12	4
Other crops	2	3	1
All crops	6	60	9
Hogs	45	15	44
Cattle	10	6	25
Sheep and poultry	5	2	4
All livestock	60	23	73
Dairy products	20	7	6
Poultry products	8	5	6
Wool and other livestock products	1		1
All livestock products	29	12	13
Other income	5	5	5
Total	100	100	100

FIG. 2. INDICES OF PURCHASING POWER OF NET FARM INCOME
OF CORN BELT FARMS BY TYPE OF FARM

(1910-14=100)



buy for the family? We compare them both with 1910-14 levels (fig. 2).

It is evident that the purchasing power of net farm income in the Corn Belt has been relatively low since 1919. Significantly, the operators of dairy-hog farms are the only ones of the three groups shown whose purchasing power since 1933 has exceeded that of the base period.

The prices of commodities bought by the farm family have lagged behind and have varied less than has the index of net farm income. That is, when the farm income drops precipitously, the farm family is even worse off than is immediately apparent because the prices the family must pay do not drop so soon nor so far.

THE better showing of these indexes during recent years is some indication that these farmers are on the road to recovery and that recent shifts towards more livestock to use roughages and pasture is a shift in the right direction. This new way of measuring the progress of farmers brings out these shifts because the indexes are constructed for specific types of farms. Applying the index measure to these specific groups of farms brings out the relationships among all the factors

facing farm managers of the Corn Belt and reflects the ways in which they are reacting to various situations.

WYLIE D. GOODSELL.

FATS, OILS: Rise

Higher prices for most fats and oils this year are suggested by the expansion in industrial production and higher incomes of consumers. Prices of lard, tallow, and grease are likely to advance relatively more than prices of other fats, because of prospective changes in the domestic supply situation. Smaller marketings of hogs this year than last mean smaller production of lard and grease. Increased production of vegetable and marine oils, however, is likely to offset most of the decrease in the output of lard and grease.

The general level of prices of fats and oils in 1940 was 5 percent higher than in 1939 but 36 percent below the average for the period 1924-29. Prices of linseed oil, butter, marine oils, and many of the imported oils were moderately to sharply higher in 1940 than in 1939. But prices of lard, tallow, greases, most domestic vegetable oils, and oils imported from the Philippines and the East Indies, declined to lowest levels in 6 or 7 years.

Forests for Conservation and Use

THE United States now has more than 176 million acres of land in national forests and purchase units. The forests (in four instances, purchase units which eventually will be turned into national forests) have been set up in all but 8 States: New York, New Jersey, Massachusetts, Connecticut, Delaware, Maryland, Rhode Island, and Kansas. There are Federal forests in Alaska and Puerto Rico. In size, the public forest holdings vary greatly. In the United States proper, the largest national forest is the Challis, in Idaho, with 2,447,080 acres in Government ownership; the smallest is the Conecuh, in Alabama, with 68,749.

National forests were made up originally of public domain land set apart from time to time for conservation of timber supplies and protection of watersheds. Since 1911, under the Weeks law enacted that year, and the Clarke-McNary amendatory act of 1924, more than 16 million acres have been added by purchase, mainly in the Eastern States. Today, mingled with the 176 million Government acres are about 50 million in privately owned parcels, some large, some small. Private lands more suitable for forests than for other use are bought by the Government as Congress makes funds available.

SETTING aside of lands for national forests was first authorized by act of Congress, March 3, 1891. Now, a half-century later, the United States Forest Service, which administers these public holdings, says that as a whole the national forests are in the best condition of the last 30 or 40 years—and this despite steady cutting out of trees for lumber and other uses, the grazing of millions of sheep and cattle annually, and continued use by recreation seekers and special use "permittees" now numbering upward of 34 million persons a year.

Next month the United States Forest Service celebrates a fiftieth anniversary. It was 50 years ago—in 1891—the Federal Congress authorized the setting aside of lands for national forests. Since then, the system of national forests has been greatly expanded. Vast areas cover the West, and their economic value is no less than their social use. Under right management, the forests are being conserved for the future while being made to serve the needs of the present. How this is being done is revealed in the accompanying article.—Ed.

The foresters point to widespread timber stands improved by thinning and culling out of diseased trees and old snags. To the replanting of more than a million cut-over acres. To the fact that about one-half of the 80 million acres of commercial timber on national forests is under some form of "sustained yield," or selective cutting management, and the remainder protected against the day when it will be in condition for cutting of lumber to begin. To the whittling down of the area annually burned over from an average 8,200 per million acres in 1910-14 to about 1,700 per million in 1935-37.

The record shows, they hold, that commercial and recreational use of forests is not incompatible with true conservation of the resource; that, indeed, right use of growing forests is quite probably the soundest form of conservation in the long run.

RECENTLY, this writer visited a site on the Hoosier National Forest in southern Indiana where a timber sale had been made. As he approached the forest along the road, it was hard to believe that the woods had been systematically put to harvest a few weeks before. The red and white oaks, yellow poplars, hickory,

ash, and beech trees stood there beautifully, with young trees of different ages beneath. It was only when he went into the forest and saw the stumps that he realized how the forester had gone through, marking the mature trees and the defective trees for cutting, and how the local contractor had logged the marked trees off under Forest Service supervision which prevented destruction of young growth and enforced proper disposal of "slash" to forestall fire. Within the general pattern of this forest-conserving method, a total of 1,779,209,000 board feet of timber was cut from national forests in the fiscal year ending last June. Receipts from sale of timber and forest products totaled \$3,871,311. The annual national forest timber cut runs around 4 percent of the cut for the entire country.

In these sales, Forest Service policy is to deal where possible with small local buyers, as opposed to large operators. Large timber sales are encouraged only where the woods and mill operations involved will support local communities or will help thinning and other forestry measures necessary to increase the growth and quality of residual stands. Last fiscal year, there were 27,512 individual cash sales of timber and forest products from national forests. This total included 2,018 sales of forest products, as distinct from timber; that is, maple sugar or turpentine taken from the trees by buyers under Forest Service supervision, tan bark, Christmas trees, ferns, shrubs, leaves for decorative purposes, seedlings and ornamental trees, staves, billets, burls, etc. There were also 6,967 sales of small amounts of timber at cost to individual dwellers within or near the forests for noncommercial home and ranch use. Of the year's sales, 25,037 amounted in value to \$500 or less, 114 to \$1,000 or less, 238 to \$5,000 or less, and 105 to more than \$5,000.

Wood of dead, insect-infested or diseased trees, or trees stagnating in oppressively dense stands, but suitable for fuel, fencing, shed-building, or

mining and prospecting purposes, was given to many forest-country families free of charge, as is Forest Service practice. Except in cases of unusual need, a limit of \$20 in value is put upon the amount of free wood allowed each individual. Sometimes, specific areas are designated where needy persons may go in and cut wood up to the stipulated value. Otherwise, the free-wood takers must have regular permits.

EIGHTY million acres of range land in national forests are used each year for the feeding of livestock owned by private individuals. In the calendar year 1939, this range land grazed approximately 7,300,000 animals, being a supplement to privately owned or leased range indispensable to the welfare of the herds and flocks. Under Forest Service permits and scales of fees based upon market prices of livestock for the previous year, 1,180,971 head of cattle, 27,897 horses and 220 hogs belonging to 19,065 owners, and 6,125,642 sheep and 5,965 goats belonging to 5,230 owners, foraged during the grazing season on the public range. No charge is made by the Forest Service for the young of the stock. In addition, 82,224 cattle, 47,734 horses, 46,361 hogs, 13,399 sheep, and 6,616 goats, required for work, travel, or food by persons operating under special-use permits on national forest land, were allowed to graze free.

The Forest Service reports that in the Western States the business of livestock and ranch interests with investments of around \$200,000,000 and controlling 4,500,000 acres of cropland and 22,000,000 acres of privately owned range land is largely dependent for successful operation upon the supplemental use of the national forest grazing resource. National forest grazing receipts for the fiscal year 1940 totaled \$1,457,120. Livestock owners using this range employ about 25,000 cowboys and herders annually, but this number is small as compared to the employment the western grass-made meat and wool industry gives to

processors and distributors throughout the country.

Best indication of the validity of the principle of conservation by wise use in connection with national forest range is the fact that the range has been continuously and productively utilized under Forest Service management—and in cooperation with livestock men—for 30 years. Management or, among other conservation practices, measures to adjust the number of animals being grazed to the capacity of the range, were made imperative by overcrowding of the range lands prior to that time. This overcrowding resulted in the historic wars between sheep and cattle men, and in the opinion of experts might well have left the range largely an eroded waste had it continued unchecked. Too close and too frequent cropping of the perennial grass plants literally kills them off, says the Forest Service, while reasonable grazing maintains "the cover" in condition to go on producing forage and protecting the land year after year.

OF the more than 34 million persons who visit national forests each year, the majority are recreation seekers. Forest Service looks back 20 years, when visitors numbered 3 million, and predicts 60 million annually 10 years hence. Great numbers of the visitors are campers and picnickers; others are hunters, hikers, and canoeists; some own summer homes in the forests; there are many tourists and sightseers. Thousands of children needing low-cost vacations are brought each year to the 548 camps suitable for use by organizations—clusters of cabins around a central hall—on national forests by nonprofit social agencies.

In the national forests are more than 50,000 camp and picnic sites. These vary from anchored sets of tables, benches, and outdoor fireplaces, or more extensive recreation groves with open-air pavilions and often beside a lake where swimming is allowed, to deep-woods cabins where hunters and hikers may put up for the

night. These camps only begin to suggest the broad variety of recreational uses: In the forests are 52 wilderness areas, each including more than 5,000 acres, where one may roam at will; 30 hotels and roadhouses; 774 resorts and clubhouses; 13,409 private homes and cottages; and 16 rifle and target ranges—all under permit. On certain special game management areas, annual deer and wild boar hunts are held. Forest Service estimates that only about 1 visitor in 10 thousand commits any act of vandalism against the public property.

As of June 1939 the national forests contained 24,077 miles of forest highways, 118,307 miles of forest development roads, and 157,501 miles of horse and foot trails to serve tourists, vacationists, and other visitors as well as local residents and communities in and near the forests. These roads and trails are of vital importance in fire protection. No tolls or entry fees are charged on national forests. Returns from timber sales, grazing fees and other permissible uses, however, for the fiscal year ending June 30, 1940, are reported by the Forest Service to have totalled \$5,859,183—largest since 1930, when they reached the all-time high of \$6,751,553.

ALAN MACDONALD,
United States Forest Service.

United States production of peanuts in 1940 was the largest on record. The crop totaled 1.6 billion pounds, compared with 1.2 billion in 1939 and with 1.0 billion average for the 10 years, 1929-38. The quantity of farmers' stock peanuts available for crushing from the 1940 crop may exceed 500 million pounds. The greatest use by domestic oil mills previously was in the 1938-39 season, when 260 million pounds were crushed. Purchases of 1940 farmers' stock peanuts by cooperatives operating under a Government diversion program totaled 741 million pounds to early January this year; of this total, 283 million pounds had been diverted to crushing mills.

What's Ahead for American Agriculture?

HOW will a continuation of the European war and of our defense program affect agriculture? Continuation of the war in Europe, with the United Kingdom holding out against Germany, will doubtless continue a heavy draft upon industry in the United States. It will also result in continued restriction on the markets for our surplus farm products. Our own defense program and continuation of the war will greatly increase industrial activity and incomes in the United States and consequently the domestic demand for many farm products.

The demand for more labor in industry and the draft upon manpower for military service will withdraw labor from farms and thus increase the costs of farm production. Defense industry demands will increase the costs of materials and of machinery used in agricultural production. This will increase the difficulties of producers of export farm commodities. Producers dependent primarily upon wheat, cotton, and tobacco for their incomes will be faced with rising costs, without rising incomes to meet these costs. This will increase the burden upon agricultural programs to maintain income and living conditions on the farms in the areas producing these export crops.

To be sure, the increase in the demand for some farm products will offer an opportunity to make some shifts in agricultural production. Farmers will find it possible to produce more dairy products, fruits, vegetables, and beef, and find an outlet for these products; but great shifts sufficient to eliminate export surpluses cannot be made over night; moreover, such shifts would probably be unwise. The

war will come to an end and defense efforts will flatten out. While planning, we must plan to minimize the let-down, to avoid, insofar as possible, such great depressions as we had in 1921 and again in 1931 and 1932.

PERHAPS we cannot be very realistic now in appraising what markets Europe will offer to us when peace is reestablished there. Certainly the winner and the conditions of peace will have some effects upon those markets. If the markets are opened—whoever may win the war—there will be an accumulated demand for cotton and for some foodstuffs from the United States and other overseas countries.

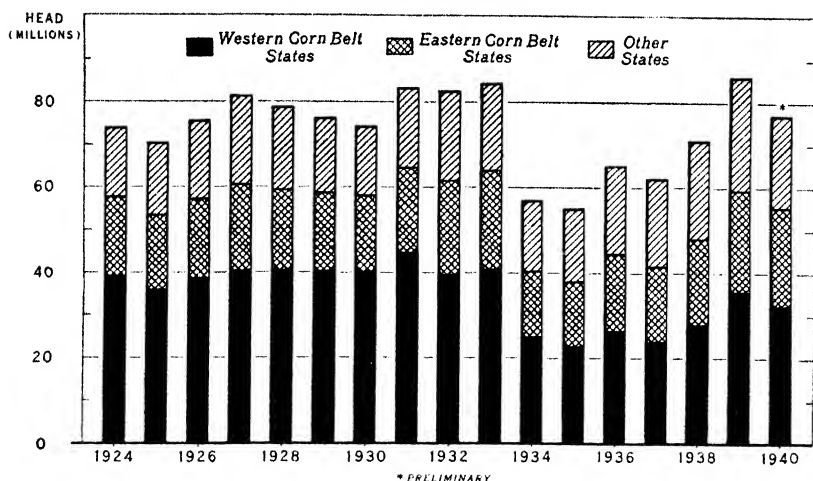
We may find at the end of the war an opportunity to unload a part of our holdings of cotton, but not as much as has already accumulated. * * * We can hardly expect to find an outlet for much wheat, in view of all the surpluses accumulating elsewhere. * * * We may find an outlet for some lard and pork, and some more fruits and vegetables.

It seems hardly probable, however, that the European markets will offer much of an outlet to the United States for long, whoever wins the war. European purchasing power will again be short, and there will be a strong incentive for increasing domestic production. The competition to be expected from other countries for the European market will be undiminished. We must prepare to absorb our own production, to a much greater extent than we did in the 1920's, following the World War.

O. C. STINE.

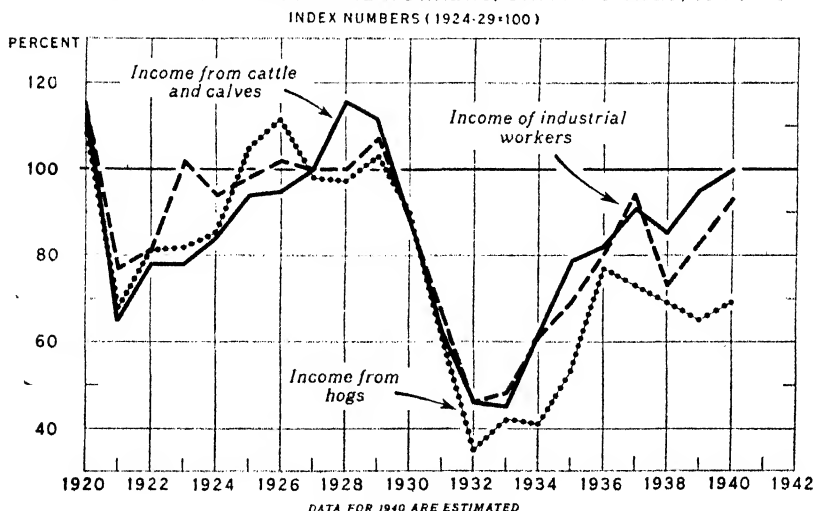
Good Risk.—The Farm Security Administration recently announced that its tenant purchase borrowers had repaid 97.4 percent of the principal and interest due on their loans up to June 30, 1940. Tenants and farm workers buying farms with the aid of Government loans had made advance payments of \$196,765—more than 8 times the total amount of delinquencies.

ANNUAL PIG CROP



The 1940 pig crop totaled 77 million head, compared with the record crop of 85.9 million head in 1939. More than half the decrease in 1940 was in States outside the Corn Belt. The decrease in the Eastern Corn Belt was small, but the number of pigs raised in the Western Corn Belt in 1940 was 10 percent smaller than a year earlier. The decrease in the 1940 pig crop means smaller marketings of hogs this year. Consumer demand for meats is expected to improve during this period, and prices of hogs will be considerably higher this year than last.

CASH FARM INCOME FROM CATTLE AND CALVES AND FROM HOGS. AND INCOME OF INDUSTRIAL WORKERS, UNITED STATES, 1920-40



The relatively low level of income from hogs in recent years is partially explained by the weaker export demand for pork and lard and the increased supplies of vegetable oils which compete with lard. There are also some indications that the domestic consumer demand for beef has strengthened relative to the demand for pork.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	(1910-14=100)					Taxes
				Whole-sale prices of all commodities ⁴	Prices paid by farmers for commodities used in \$—			Farm wages	
					Living	Pro-duction	Living and pro-duction		
1925	91	98	101	151	164	147	157	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	158	147	153	180	281
1930	91	88	96	126	148	140	145	167	277
1931	75	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	75	96	109	108	109	85	187
1934	75	61	77	109	122	125	123	95	178
1935	87	69	79	117	124	126	125	103	180
1936	103	80	80	118	122	126	124	111	182
1937	113	94	83	126	128	135	130	126	187
1938	88	73	81	115	122	124	122	125	186
1939	108	83	80	113	120	122	121	123	190
1940	122	94	81	115			122	126	
1940—January	122	93	80	116			122	119	
February	116	89	81	115			122		
March	113	87	81	114	121	125	123		
April	111	86	81	115			123	124	
May	114	87	81	114			123		
June	121	89	81	113	121	125	123		
July	121	91	81	113			122	129	
August	121	95	81	113			122		
September	125	98	81	114	121	123	122		
October	129	100	81	115			122	129	
November	132	102	81	116			122		
December	136	107	81	117			122		
1941—January ⁷							123	124	

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chick-ens and eggs	
1925	157	177	172	153	140	153	163	156
1926	131	122	138	143	147	152	159	145
1927	128	128	144	121	140	155	144	139
1928	130	152	176	159	151	158	153	149
1929	120	144	141	149	156	157	162	146
1930	100	102	162	140	133	137	129	126
1931	63	63	98	117	92	108	100	87
1932	44	47	82	102	63	83	82	65
1933	62	64	74	105	60	82	75	70
1934	93	99	100	103	68	95	89	90
1935	103	101	91	125	118	108	117	108
1936	108	100	100	111	121	119	115	114
1937	126	95	122	123	132	124	111	121
1938	74	70	73	101	114	109	108	95
1939	72	73	77	105	110	104	94	93
1940	85	81	79	114	108	113	96	98
1940—January	90	85	66	121	103	119	91	99
February	91	85	76	159	101	118	98	101
March	92	85	73	118	102	114	83	97
April	96	85	81	128	104	110	82	98
May	92	83	88	117	108	106	84	98
June	83	81	104	112	102	104	81	95
July	78	80	89	98	110	105	88	95
August	76	77	79	107	110	109	90	96
September	77	76	73	114	114	111	104	97
October	80	78	79	99	112	116	112	99
November	83	79	71	98	112	121	120	99
December	81	79	75	93	111	128	122	101
1941—January	84	80	78	117	128	121	100	104

¹ Federal Reserve Board, adjusted for seasonal variation. Revised August 1940.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports. Revised.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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A Brief Summary of Economic Conditions

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ANOTHER CROP PLANTING SEASON has begun. Plowing and planting of new crops are under way in the South, and moving progressively North as the earth is made ready to take the new seed. Total acreages planted do not change much one year with another, but there may be some changes as between crops this season in view of the large supplies of export commodities, the loss of export markets, and the more favorable position of products used in domestic consumption. Early prospects are for a good growing season. * * * Economists predict a better domestic demand for farm products this year than last, a higher average of prices, and larger total farm income. Prices average higher than at this time last year—both prices received by farmers and the prices farmers pay for commodities used in production. Farmers are paying higher wages this season than last and employing more help. * * * The problem now is how the producers of export products—cotton, tobacco, wheat, and fruits—may share in the general improvement in farm prices and income. A supplemental adjustment program has been announced for cotton, and tentative plans for a marketing quota referendum on wheat. Tobacco acreage may be about the same this year as last. No indications were available in early March as to acreages of feed grains.

Commodity Reviews

DEMAND: Improved

THE sharp rise of industrial activity and consumer purchasing power in the last half of 1940 has resulted in a definite, but less marked, improvement in the domestic demand for farm products. Signs of improvement are found in connection with most commodities which are not adversely affected by the unfavorable export situation. Prices of apples have been somewhat higher than last year, and orange prices are up despite larger supplies. Livestock prices are distinctly higher than a year earlier, influenced recently by reduced hog supplies as well as by the improvement in consumer demand.

Changes in industrial activity and consumer income during the next few months are expected to be relatively small, but indications point to a further pickup after new defense plants come into operation next summer and fall. Of course, sudden and drastic changes in the international situation could materially alter the outlook.

The immediate export demand situation continues unfavorable, with large competitive supplies in other surplus-producing nations, many markets entirely cut off, and British purchases restricted to necessities. Easing of dollar exchange difficulties for Great Britain might be accompanied by increased exports of farm products, but these possibilities are still very uncertain.

F. L. THOMSEN.

INCOME: Up

Government estimates of farmers' cash income from marketings, commodities placed under loan, and Government payments in 1940 have been raised to 9,120 million dollars, compared with 8,668 million in 1939, with 8,134 million in 1938, and 9,155 million in 1937. Figures for 1940

include 8,354 million dollars from marketings and loans on crops, livestock, and livestock products, and 766 million from Government payments. Approximately two-thirds of the increase in 1940 over 1939 was from livestock and livestock products. Government payments were smaller by 41 million dollars than in 1939.

Income from livestock and livestock products totaled 4,818 million dollars in 1940, compared with 4,490 million in 1939; income from marketings and loans on crops totaled 3,536 million, compared with 3,372 million in 1939. The largest percentage gain in the livestock and livestock products group was from dairy products, which yielded farmers 1,501 million dollars cash as compared with 1,355 million in 1939.

Most of the principal crops except tobacco, fruits, and sugarcane yielded more cash income in 1940 than in 1939. Income from grains was the largest since 1929, cotton yielded slightly more cash than in 1939, income from vegetables was larger than in 1939. Income from sugarcane for sugar and sugarcane sirup was sharply lower, but sugarbeets returned the largest income for recent years.

Cash income, including Government payments, was higher than in 1939 in 39 States. The 9 States showing smaller income included Louisiana, Mississippi, Florida, North Carolina, South Carolina, New Hampshire, Massachusetts, Alabama, and Washington. Largest gains were in Minnesota, Iowa, North Dakota, South Dakota, and Montana.

PRICES: Down

Products which are important sources of farm income in late winter—dairy products and eggs—declined during the past month, but the average of all products combined is higher than at this time last year. Prices of

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
January.....	99	122	81
February.....	101	122	83
March.....	97	123	79
April.....	98	123	80
May.....	98	123	80
June.....	95	123	77
July.....	95	122	78
August.....	96	122	79
September.....	97	122	80
October.....	99	122	81
November.....	99	122	81
December.....	101	123	82
1941			
January.....	104	123	85
February.....	103	123	84

¹ Ratio of prices received to prices paid.

² Revised.

bread grains declined, but farm marketings of such grains are not large at this time of year. Principal commodities selling higher during the month included fruits and vegetables.

The general level of prices received by farmers is not expected to change

much during the next few months; but the general tendency for the year as a whole will probably be toward a higher level. This applies especially to products dependent almost entirely upon domestic markets. Prices paid by farmers for commodities used in agricultural production also are likely to advance.

The ratio of prices received to prices paid is 16 percent below the pre-World War base of 100. The only major groups of commodities showing a higher-than-pre-war ratio of prices received to prices paid are truck crops and meat animals. Lowest ratios are shown for grains, cotton and cottonseed, and fruits.

EMPLOYMENT: Increase

Farm employment is increasing as a new planting season gets under way, increasing South to North progressively up through the country. Farmers have been employing more hired help this winter than last, and paying higher wages.

Estimate is that 1,793,000 hired workers were employed on farms

Prices of Farm Products

Estimates of average prices received by producers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of districts and States.

Product	5-year average, August 1909-July 1914	February average, 1910-14	February 1940	January 1941	February 1941	Parity price, February 1941
Cotton, lb.....	cents 12.4	12.3	9.97	9.45	9.44	15.87
Corn, bu.....	do 64.2	60.1	54.7	56.0	56.0	82.2
Wheat, bu.....	do 88.4	89.2	84.1	73.0	67.8	113.2
Hay, ton.....	dollars 11.87	12.02	8.10	7.78	7.88	15.19
Potatoes, bu.....	cents 69.7	66.3	75.2	54.6	54.6	187.6
Oats, bu.....	do 39.9	39.8	37.7	33.3	32.9	51.1
Rice, bu.....	do 81.3	(1)	68.7	87.9	96.3	104.1
Tobacco:						
Flue cured, Types 11-14, lb.....	do 22.9	(1)	9.5	11.7		
Burley, Type 31, lb.....	do 22.2	(1)	17.0	15.5	11.8	21.8
Apples, bu.....	dollars .96	1.06	.81	.90	.93	1.23
Beef cattle, cwt.....	do 5.21	5.11	6.84	8.09	8.34	6.67
Hogs, cwt.....	do 7.22	7.12	4.97	7.26	7.19	9.24
Chickens, lb.....	cents 11.4	11.1	12.2	13.7	14.0	14.6
Eggs, doz.....	do 21.5	23.7	20.2	19.7	16.8	24.8
Butterfat, lb.....	do 26.3	27.4	29.7	31.1	30.5	34.4
Wool, lb.....	do 18.3	18.5	27.8	31.3	32.1	23.4
Veal calves, cwt.....	dollars 6.75	6.77	8.80	9.70	10.11	8.64
Lambs, cwt.....	do 5.87	5.95	7.61	8.34	8.60	7.51
Horses, each.....	do 136.60	137.00	78.20	70.20	70.40	174.80

¹ Prices not available.

² Adjusted for seasonality.

³ Post-war base.

February 1—principally in the South—as compared with 1,693,000 on that date last year. There was a corresponding decline in numbers of family workers. The number of family workers was 6,989,000 as compared with 7,088,000 on February 1 last year.

A trend toward a larger proportion of hired men in the total number of persons working on farms has been in evidence this winter. This may reflect some displacement of tenants and sharecroppers by hired workers.

WHEAT: Referendum

Important wheat news of the month was that tentative plans for holding a national marketing quota referendum among growers on May 31 had been approved by the Secretary of Agriculture. Indications were that the 1941-42 supply of wheat would be in excess of the probable marketing quota level.

Marketing quota provisions of the Agricultural Adjustment Act are that a marketing quota proclamation is mandatory whenever it appears, by May 15, that the total supply of wheat for the next marketing year will exceed a normal year's domestic consumption and exports by more than 35 percent. The 1941 winter wheat crop has been estimated at 633 million bushels. The current estimate for the July 1 carry-over is 385 million bushels. If these estimates materialize and if the spring wheat crop is of average size, the 1941-42 supply of wheat would total 1,200 million bushels. The 1940 marketing quota level was 1,023 million bushels.

The quota will become effective when announced and will continue during the 1941-42 marketing year unless opposed by more than one-third of the farmers voting in the referendum. Under the quota, a cooperating wheat farmer, one who plants within his wheat acreage allotment, is free to market all he produces plus his carry-over wheat. Wheat in excess of the quota on an overplanted farm is subject to a penalty unless it is stored under seal. If a quota is proclaimed

and disapproved, the law specifies that no government loans can be made on the crop.

COTTON: Record

New high records of consumption are being established by the cotton mills. The output of mills has been sold well in advance, so that production will continue at high levels the remainder of this year. Each month the estimated total of domestic consumption is raised, and the total now is placed at approximately 9 million bales for the year ending July 31 next. This compares with 7.8 million bales in 1939-40.

Export demand continues small. United States exports totaled only 660 thousand bales during the first half of the 1940-41 season, compared with 4.2 million bales in the like period a year earlier. The United Kingdom is the largest customer for American cotton, but total shipments have been small during the past year. Reports have indicated recently that a more widespread system of control of the cotton industry in the United Kingdom is being contemplated, to reduce production for civilian use so that shipping space may be conserved and labor released for work in munitions plants.

The price of raw cotton in the United States—slightly more than 10 cents a pound in spot markets—is being supported by Government loans. Many foreign growers sell in world markets for less money.

TOBACCO: Big Supply

The supply of flue-cured tobacco is the largest on Government record. Total for 1940-41 was estimated at 2,144 million pounds, compared with 2,106 million for 1939-40, and 1,740 million for 1938-39. The current supply of flue-cured is more than 3 times the disappearance of 696 million pounds in 1939-40. Stocks on July 1 next will be the largest on record, unless the export situation should im-

prove. Flue-cured exports totaled 55 million pounds during the last 6 months of 1940, compared with 140 million in the like period of 1939, and with 257 million during the last half of 1938.

The flue-cured marketing quota for 1941 has been set at 618 million pounds, not including adjustment allowances for small farms. After adjustment, the conversion of this marketing quota to an acreage basis will result in a total of about 770,000 acres. The tobacco grown on the allotted acreage will become the marketing quota for each farm. This acreage is slightly higher than that harvested in 1940 but is only 60 percent of the area planted to flue-cured in 1939. At average yields for the last 5 years this acreage would produce 678 million pounds of tobacco.

FEED: Plentiful

The supply of feed grains and by-product feeds is more than enough for the number of animals on farms, and prices are being supported by Government loans. The hog-corn price ratio has become favorable to hog producers, the relation of beef cattle prices to corn prices and of butterfat to feed prices is about average, but the feed-egg price ratio has been unfavorable to poultry producers this winter.

Disappearance of corn is expected to be somewhat smaller during the remainder of this marketing year than in the like period of 1940. The quantity of corn carried over on October 1 next may be 75 million to 100 million bushels larger than the quantity carried over on that date last year.

CATTLE: Increase

Cattle slaughter will probably be larger this year than last, coincident with an increase in number of cattle on farms. Cattle and dairy men have been rebuilding herds the last 3 years, a tendency that is likely to continue for at least another 2 or 3 years. Cattle numbers are likely to reach and perhaps exceed the all-time high

record of cattle numbers in 1934. This would mean large marketings within the next 5 years. Unusually heavy supplies of beef and veal might come at a time when consumer demand may be less favorable to producers than it is now.

Cattle slaughter increased slightly in 1940, but most of the increase was in steers. Inspected steer slaughter totaling 4.9 million head was 6 percent larger than in 1939, and the largest in 22 years of record. Inspected cow and heifer slaughter totaled 4,481,000 head, compared with 4,446,000 in 1939. This was the first increase in slaughter of cows and heifers since 1936; it may mark the beginning of an upward trend in cow and heifer slaughter which will continue for several years.

The extent to which marketings of cattle and calves for slaughter will increase in 1941 over 1940 will depend chiefly upon how large a number of breeding stock producers hold back for herd-building. Barring unfavorable weather, the increase in breeding stock in 1940 will be reflected in a substantial increase in the 1941 calf crop over that of 1940. Even though producers hold back breeding stock in about the same number this year as last, total slaughter of cattle and calves in 1941 could exceed that of a year earlier by as much as 4 to 5 percent.

Marketings of grain-fed cattle will be larger this year than last as a result of an 11-percent increase in number of cattle being fed this season. Most of the increase in marketings of these cattle will be during the last half of the year.

HOGS: Higher

Supply and demand conditions continue to point to higher prices of hogs and larger income to hog producers this year than last. The seasonal reduction in hog marketings in late December and early January was more pronounced than a year earlier, and hog supplies are smaller than at this time last year. The total number marketed during the remainder of the

year—through next September—will be about 15 percent smaller than in the corresponding period of 1940. It is expected that hogs slaughtered under Federal inspection this marketing year (October 1940–September 1941) will total about 45 million head, compared with 50.4 million during the preceding year.

Reports from farmers in December indicated that 14 percent fewer sows would be farrowed this spring than last. But since the hog-corn price ratio has become favorable for hog production, the decrease in number of pigs raised this spring may be smaller than this figure indicates. However, it seems certain that fewer hogs will be marketed in the first quarter (October–December) of the 1941 marketing year as compared with the like period in 1940. Higher prices of hogs this year than last suggest an increase in the 1941 fall pig crop over that of 1940.

LAMBS: Increase

The fed-lamb marketing season ends about May 1. Marketings are declining seasonally, but the total supply of sheep and lambs for slaughter is expected to be a little larger this spring than last, chiefly because of the 6 percent more sheep and lambs on feed this January 1 than last. A fairly large market movement of fed lambs was reported from Corn Belt feed lots during January, but a considerable proportion of the January supply was from wheat pastures, particularly in Kansas where feeding conditions were much more favorable this season than last.

It was reported late last month that early lamb conditions were favorable in California and Arizona, that lambing had started in the early lambing areas of Idaho, Oregon, and Washington, and that the condition of sheep and the feed supply were favorable for the early lamb crop. Weather conditions in the Western Sheep States were better than average this winter. The condition of western sheep and lambs on February 1 was above average for that date.

WOOL: Good Prospects

A new wool marketing season is about to open with favorable prospects indicated by domestic supply and demand conditions. The carry-over of domestic wool into the new season which begins about April 1 will probably be the smallest in recent years. Mill consumption of wool is expected to be larger in the first half of this year than last.

Imports of wool were large during the first quarter of 1941, but mill consumption also was large, and stocks of domestic and imported wool are relatively small. The small carry-over and the prospects for large mill consumption will be strong supporting factors to domestic wool prices.

Prices of wool are expected to average higher this spring and summer than last. Since last spring, however, prices have advanced materially and any advance from recent levels is likely to be moderate. Relatively large supplies of wool are available for shipment from foreign countries to the United States.

POTATOES: Surplus

Potato supplies have been so large and prices so low this winter the Surplus Marketing Administration inaugurated a program providing for diversion of about 12.5 million bushels of western late crop potatoes to livestock feed. Growers eligible to participate were those who cooperated in the 1940 AAA potato acreage allotment program in designated commercial producing districts of 8 western States. The program provided for diversion payments of 25 cents per 100 pounds to eligible growers. A similar program in Maine provided for the diversion of 6.5 million bushels to the manufacture of starch.

Meanwhile, a new southern crop has been coming along on an acreage somewhat larger than in 1940. Market supplies of all potatoes will be larger during the next few months than in the like period last year. Little im-

provement in prices is expected notwithstanding better consumer demand for foods this year than last.

RICE: Higher

Growers are getting higher prices for rice this season than last. Demand has been active for both rough and milled rice, and exports have been larger than during corresponding months a year earlier. Exports have been principally to Cuba, where American rice has been favored by reduced competition from the Orient.

Available statistics indicate a somewhat smaller world crop of rice this year than last. Smaller crops have been reported for Northern Hemisphere countries including Japan, China, Thailand (Siam), the Philippine Islands, and the United States. The crop in French Indo-China is reported about the same as the good harvest of a year ago, but no information has been received as to the size of the Indian crop.

Rice is harvested in the Southern Hemisphere from March to May. Available information is that the crop will be no larger this year than last.

TRUCK CROPS: Increase

Harvesting of winter vegetables was held back by heavy rains, and market prices advanced sharply in February. Even so, prices were slightly lower this February than last. Plantings of winter truck crops were larger this year than last, but the storms came again in late February, and frost nipped tender vegetables all the way south to the Florida Everglades. As of March 5 it was indicated that supplies of many green vegetables would be short for another month or six weeks.

Supply and demand conditions indicate larger plantings of truck crops for processing this year than last; that prices to growers will be slightly higher, and income larger. It was estimated in February that total planted acreage of all important truck crops for processing would be increased about 20 percent this season. Planted area of

11 crops for processing in 1940 totaled 1.4 million acres.

FRUITS: Increase

Government purchases of citrus fruits and apples for relief distribution will probably be continued during the next few months in view of the large available supplies of these fruits. Increased consumer buying power also is expected to help offset the effect of the large supplies on prices to growers. February estimates put the production of oranges and grapefruit at 4.8 million tons in 1940-41 compared with 4.3 million tons the preceding year. Cold storage holdings of apples were 2.6 million bushels larger this February than last.

January 1 stocks of important canned fruits in California were 10 percent smaller than on that date last year, and the smallest since 1937. Stocks of fruit cocktail and pears were larger this January 1 than a year earlier; stocks of apricots, cherries, fruit salad, and peaches were smaller.

DAIRY: Expansion

The dairy industry continues to expand. The number of cows on farms is the largest since 1935; the number of young stock to be added to milking herds is the largest on Government record. Dairy production will continue to increase so long as feed supplies are ample and consumer buying power rises.

Seasonal trend of dairy prices is downward at this time of year. Prices will likely continue downward until June, when the annual production peak is reached. Probability is that production will set a new high record this year, but the effect of this on prices will likely be offset by improved consumer demand for milk and manufactured products.

Farm production of 111.1 billion pounds of milk in 1940 was the largest on Government record. The average number of milk cows on farms during the year was 24.3 million—the largest number since 1935, but 4 percent

smaller than the high record number in 1934. Total consumption of dairy products in 1940 also set a new high record.

FATS, OILS: Up

Domestic fats and oils have been selling higher in recent months, are expected to improve more in response to improved consumer buying power the remainder of this year. The price movement was downward during the first 8 months of last year; now it is upward. Average for the full year 1941 is likely to be higher than in 1940.

Production of fats and oils from domestic materials set a new high record in 1940. Total was nearly 9 billion pounds. Lard, greases, tallow, and linseed and soybean oils accounted for most of the increase over production in 1939. It is expected that production total will be about the same this year as last. Lard and grease production will be substantially smaller, but this reduction may be offset by larger output of vegetable and marine oils.

Both imports and exports of fats and oils were reduced in 1940, stocks were increased to a new high record, domestic consumption was expanded moderately to reach 9.8 billion pounds—another high record. A marked increase in consumption of domestic fats in 1940 was mainly at the expense of imported items.

POULTRY: Prospects

Improved consumer demand is the big factor pointing to higher poultry prices this year than last. Receipts of live poultry at primary markets in the Middle West, and of dressed poultry at principal markets have averaged smaller since the first of this year than in the like period in 1940. Larger out-of-storage movement of frozen poultry during this period also has reflected the smaller farm marketings of live poultry and the continued heavy consumption of poultry meat. Nevertheless, storage stocks of poultry on February 1 were the largest on record for that date.

Production of winter broilers was at a near-record level in January. The number of chicks produced by commercial hatcheries was 42 percent larger than the reduced output in January 1940. The number of eggs set during the month and the number of chicks on order at the end of the month also were much larger than a year earlier. The hatchery output of baby chicks is being used mostly for flock replacement rather than for commercial broilers. Farmers reported as of February 1 intentions to buy 9 percent more baby chicks in 1941 than in 1940.

Turkey producers reported last month they intend to hatch the same number of poults this year as last, but to buy 5 percent fewer poults from commercial hatcheries. This indicates continuation of the tendency shown last year toward an increased proportion of home-hatched poults.

EGGS: Higher

Production of eggs is close to peak figures for the year, but the total may be slightly smaller this spring and summer than last, since there are fewer layers on farms. Numbers of layers totaled 324 million in January, compared with 332 million in the same month last year. Numbers usually decrease through midsummer, then increase. Peak of egg production is in April, there is a small decrease in May, and then a steady decrease through November.

Mid-winter egg markets were heavily supplied, prices declined, and the Government bought eggs for relief distribution. The outlook is for smaller production of eggs in coming months as contrasted with a year earlier, combined with improving consumer demand as incomes of non-agricultural workers increase. It is expected that the feed-egg price ratio will be more favorable to producers during the important egg-producing months this spring compared with last. Prospects also are for a better storage demand this season.

FRANK GEORGE.

Our Reduced Farm Exports

FARM exports from the United States seem to have reached rock bottom in the past few months. Since the European War entered its second year (in September 1940), exports have been moving out at only about one-third the rate maintained in the first year. To find a comparably low autumn movement, one would have to look back more than fifty years. Moreover, the prospect for improvement is as uncertain as ever, although a new development is the distinct possibility that the United Kingdom would buy our farm products in considerable quantities should her concern over war time credit and foreign exchange problems be solved.

The much-discussed quirks of the cotton-export situation are, of course, the main reason why the general export picture is so much blacker than it was a year ago. At that time, while foreign takings of other farm exports were shrinking, foreign cotton buyers were racing to fill depleted warehouses before the United States export program might be terminated or ocean shipping rendered precarious. Hence, the level of cotton exports was fairly good for most of the season. For 2 months it rose even above average pre-depression levels. In the current season every important factor is working the other way. Cotton exports are running at the lowest levels in 75 years.

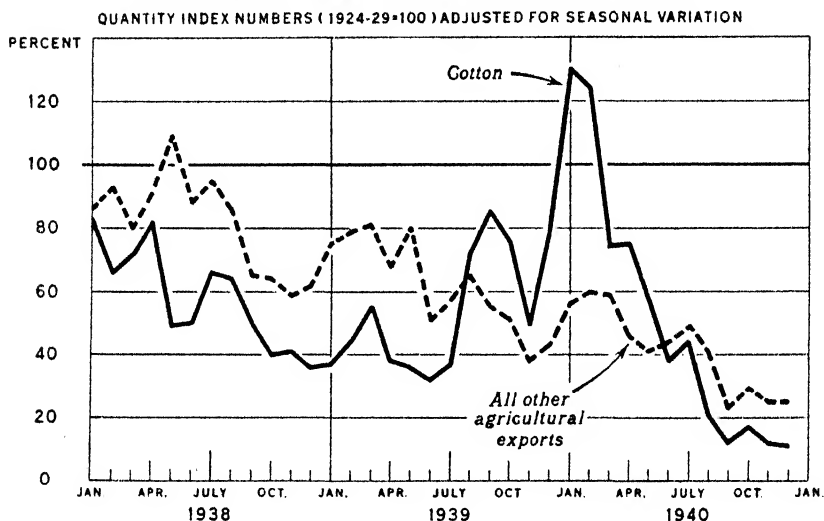
But even without cotton, farm exports in the second year of the war are running at only a little more than half the level in the first year, in spite of the fact that the latter represented a fall of about 25 percent from the preceding 12 months. The level reached in the first 4 months of the second year of the war is a record low for this index as well as for that of cotton exports.

EVERY farm product important in our export trade—practically every product (whether or not im-

portant in the total) that ordinarily depends on exports for any significant part of its market—has suffered seriously. Tobacco, fruits, and cured pork have fallen farthest. These products have been moving at less than one-fourth of their pre-war rate. Cotton and wheat (including flour) are next, shipments having been reported at between a fourth and a third of the rate in the pre-war 12 months. These five groups ordinarily make up more than three-fourths of our total farm exports. Including lard they make up about 85 percent of the total. Lard has been moving at about one-half of its immediate pre-war rate; but this is worse than it seems since the pre-war rate was low, lard supplies available for export not having completely recovered from drought-period shortages. By comparison with the pre-drought, pre-war, and pre-depression period, 1924-29, on which the new export quantity indexes of the Office of Foreign Agricultural Relations are based, lard is second only to cured pork and cotton in the degree of decline among the major farm export groups.

Some farm products have been moving out in relatively good volume. These include dairy products, especially evaporated milk which has been purchased in unusually large quantities by the United Kingdom. Evaporated milk is a practically necessary food element, it is not perishable, it requires relatively little shipping space, and is comparatively inexpensive—it exactly meets the needs of the British emergency. Other export products going out in relatively good quantity include rice (to Cuba), stearin and fatty acids, tallow, grapes, oranges, malt, green beans, fresh tomatoes, potatoes, hops, and cornstarch and corn flour. Increased quantities of more than half of these products have been exported to Canada. But all of these products together have not been sufficient to affect noticeably the declining total of all farm exports.

UNITED STATES AGRICULTURAL EXPORTS: COTTON AND ALL OTHER, 1938, 1939, AND 1940



AT the outbreak of war, it was expected that lard, pork, and certain canned and dried fruits would move in increased quantities, although it was foreseen that tobacco, fresh fruit, feeds, and perhaps wheat would suffer considerable declines. It was generally anticipated that food consumption by the then allied powers would continue at at least peace-time levels; for, in spite of the example given by Germany throughout 6 years of preparation for war, it was not realized how far the demands of total war could lead a country to voluntarily restrict consumption. It was not anticipated, moreover, that the fear of a dollar-exchange shortage would be of basic importance in determining British purchasing policies, and there was a tendency to underestimate Britain's ability to maintain her ocean supply lines from the Southern Hemisphere. Finally, the military situation developed in a wholly unexpected way, cutting off continental markets, particularly France. These developments lie behind much of the great export decline.

There are evidences, however, that the picture may be changing to some extent. Probably because of reduced stocks or a desire not to decrease con-

sumption further, it appears that the British need for food imports is now greater than during earlier months. Moreover, the tightening of the shipping situation, not only by losses of tonnage but also by damage to port facilities and other war disturbances, may be threatening to force partial abandonment of the longer ocean routes.

EVEN more important than these foreign developments, however, would be a change in the British attitude toward the credit situation. As has been pointed out, a big factor in curtailed United Kingdom purchases of our farm products has been the fear of a future shortage of dollar exchange that would cut off the supply of airplanes and munitions.

The farm products in greatest demand by the United Kingdom, however, will probably be quite different from the products we are most anxious to sell. Our surpluses include tobacco, corn, cotton, wheat, fruits, and lard. The British would probably ask for pork and dairy products. While we could supply some of their needs without curtailing our own consumption, the British would have little present

interest in the items we have in **greatest surplus**. Hence, the present outlook does not appear very bright from the point of view of the former great export crops which have been accumu-

lated in the United States. The producers of these crops will continue to face a restricted world market.

R. B. SCHWENGER,

Office of Foreign Agricultural Relations.

Opening New Areas to REA Power

RURAL electrification in the United States has spread rapidly during the last 5½ years. On January 1, 1935, a few months before establishment of the Rural Electrification Administration, only 744,000 American farms¹ had central station electric service. By June 30, 1940, the number had increased to 1,872,000.² About half of the 1,128,000 farms connected during the 5½ years are served by lines financed by REA. The remainder are served by lines built by private utilities, and by various municipalities and other public bodies, without resort to REA financing.

The increase in the number of farms served has been accompanied by a sharp change in the type of rural areas traversed by power lines. Before 1935, most of the American farms served were located close to urban centers or in compact communities along main highways, and had received electricity incidentally to urban or suburban development. Today, a growing proportion of the new rural power lines are in open country. This is especially true of lines financed by REA, most of whose 747 borrowers³ are farmer cooperatives operating strictly rural electric power systems, planned in accordance with the principle of area coverage to serve whole areas.

THE original REA was established by Executive Order of the Presi-

¹ Estimated by Edison Electric Institute.

² Estimated by Rural Electrification Administration.

³ As of August 31, 1940. Of these 670 are cooperatives, 53 public bodies, and 24 private utilities.

dent on May 11, 1935. Subsequently, the Congress passed legislation to give the program greater permanency. The Rural Electrification Act of 1936, under which REA now operates, provides for a 10-year program of rural electrification through self-liquidating loans, continuing until 1946. It authorizes an annual loan fund of \$40,000,000. Twice the Congress has increased the loan fund—to \$140,000,000 during fiscal 1939, and to \$100,000,000 during fiscal 1941. The law restricts service extended under its provisions to unserved persons in rural areas, including incorporated villages and boroughs of less than 1,500 population.

Owing partly to the practice of area coverage first widely inaugurated by REA, and partly to cream-skimming practices of power companies which had already taken service to many of the more prosperous areas before REA was set up, rural areas served by the cooperatives that form the bulk of REA borrowers have from the start been thinner than those served by private utilities. As the program advances, unserved areas become progressively thinner. Hence REA continually faces new problems of reducing construction and operating costs and of enabling farmers and other rural users to obtain electrical equipment at minimum cost and teaching them to utilize electricity liberally and productively. (REA has been able to reduce the over-all cost of building rural electric power lines to an average of less than \$800 a mile. Prior to REA, rural lines cost from \$1,200 to \$2,000 a mile.)

RECENTLY REA has taken three important steps designed to increase the number of American farm families it is feasible to serve. Two of these broaden the areas that can be served on a self-liquidating basis. The third, while it does not broaden service areas, enables many sharecroppers and other extremely low-income families living along existing REA lines to enjoy the simplest benefits of electricity.

One step is the adoption of the "self-help" plan for system construction. Under it, the contractor building a cooperative's system agrees to hire members to do the nontechnical work. They assign their wages to pay for wiring their premises and, if they wish, for a few appliances as well. First introduced in Indiana, this plan has been used widely in Arkansas and increasingly in other States. Since members are paid the prevailing wages for the type of work they do, the self-help plan does not reduce the cost of the cooperative's system; it does, however, make possible the building of self-sufficient systems in areas where many farmers, while able to pay for electricity as they use it, are unable, without hardship, to make the necessary initial investment for wiring and appliances. In effect, the self-help plan applies to construction of an electric power system the traditional methods of the "barn-raising" and the "husking bee."

THE other two steps recently taken to increase the number of farms it is feasible to serve on a self-liquidating basis have been made possible by the development of new equipment. The first of these was the introduction of limited service, and the second (just going into effect) the adoption of a new policy whereby the REA system furnishes the main service entrance or all members. The main service entrance includes not only the meter receptacle, but also overload protection for circuits within the house, though not for circuits in barns and other nonresidential farm buildings.

The Limited Service Plan is optional with the individual system. It is the answer of REA to the challenge presented by location along REA system lines of large numbers of sharecroppers and other low-income families. These families cannot afford complete wiring installations, nor can they afford to pay even the low minimum bills that REA systems charge for standard service. The limited service plan enables a cooperative otherwise self-sufficient to serve a considerable number of such families for a minimum bill of around a dollar a month.

The heart of limited service is a special service entrance assembly of low cost and small capacity. This consists of a 600-volt-ampere transformer, an inexpensive entrance cable, and a special meter and overload protection assembly. It was designed by REA engineers cooperating with the staff of an interested manufacturer, and is available to systems through a group purchase arrangement which keeps the price to a minimum. This equipment will supply enough electricity so that the low-income consumer can operate a few lights and small appliances such as a radio or a low-wattage hand iron. It will not deliver sufficient energy to operate such major appliances as a refrigerator or a washing machine as the circuit-breakers trip instantaneously when the load reaches 700 watts.

Limited service does not count either way in determining the feasibility of a proposed system. Cooperatives who have adopted it offer it only to families clearly unable to pay for regular service. It does, however, enable a cooperative without loss to provide limited electric service to many people who otherwise could not expect to use electricity at all. The Limited Service Plan does not open up new rural areas for development. It does make service available to thousands of low-income homes in areas already served.

THE new service entrance policy widens feasible service areas by sharply cutting the cost of all members' wiring installations. It was made possible partly by the reduction in line construction costs by REA, and partly by the development of a single unit that combines the meter receptacle and overload protection devices for house circuits. The meter loop, meter receptacle, main disconnect switch and house circuit protection formerly cost the member \$10 to \$25 or more, depending on how many and how heavy the circuits he installed.

The reduction that REA has effected in line construction costs makes it feasible for the system to assume the service entrance cost and amortize it over a 20- to 25-year period. The new service entrance equipment is less expensive than the old. In addition, the cooperative buys it through a group purchase plan that reduces the cost still further. Also the cooperative contracts for installation of the service entrances of all signed members while the lines are being built. Hence it can install the equipment more economically than could the individual member.

Both the cooperative and the member benefit from the new policy. The cooperative starts operation with practically its entire signed membership ready to begin taking service, whereas in the past it was often the case that a sizeable number of the members were still unconnected at energization. Hence the building up of revenue is hastened. Owing to the reduced cost of wiring, the members are able to install more appliances at the start than under former procedures. Thus the cooperative builds load more rapidly than formerly, and at the same time the members are able to get more good out of their new service. Additions to a member's wiring system become less costly than in the past;

especially is this true of the heavy-duty, three-wire circuits necessary for installation of a range or of a motor of more than 1 horsepower.

DURING the current fiscal year. REA expects to allot \$100,000,000 and to complete construction of 70,000 miles of rural lines to serve 175,000 farm families and other rural users. Construction financed out of 1941 funds but extending into future fiscal years is expected to add another 42,000 miles to serve 105,000 members. The savings accruing to members as a result of the new service entrance policy will total roughly \$4,200,000, much of which will flow into the electrical equipment industry, thus increasing the initial earning capacity of the new lines still more.

Meanwhile REA's construction and operations engineers continue their search for new ways of reducing construction and operating costs. At the same time REA's utilization specialists are striving to make electric service more useful to system members, partly by helping them to learn to use electricity productively on their farms and in their homes, partly by developing plans from which farmers themselves can make or assemble simple electrical equipment at small expense, and partly by stimulating development of new electrical equipment and adaptations of and price reductions in existing equipment.

HARRY SLATTERY,
*Administrator, Rural Electrification
Administration.*

BUYERS

FARMERS bought 10,800 properties from the Federal land banks and Land Bank Commissioner in the first 9 months of 1940—more than one-fourth of the entire inventory. Total purchase price was more than \$27,000,000.

Competition in Mortgage Lending

TO what extent does competition in farm-mortgage lending come to a focus in the interest rate charged? This is a question of more than academic interest. For example, to what extent is it reasonable to expect that the ability and willingness of federally sponsored lending institutions to offer farm-mortgage credit at reduced interest rates will induce private lenders to reduce their interest rates? Also to what extent is a reduced rate of interest alone a sufficient incentive for borrowers to shift their loans to the lower rate lenders? To answer such questions it is necessary to take account of the nature of competition in farm-mortgage lending, and particularly, to appraise the significance of interest-rate competition in this field. It is possible here to do little more than to indicate some of the factors to be considered in such an appraisal.

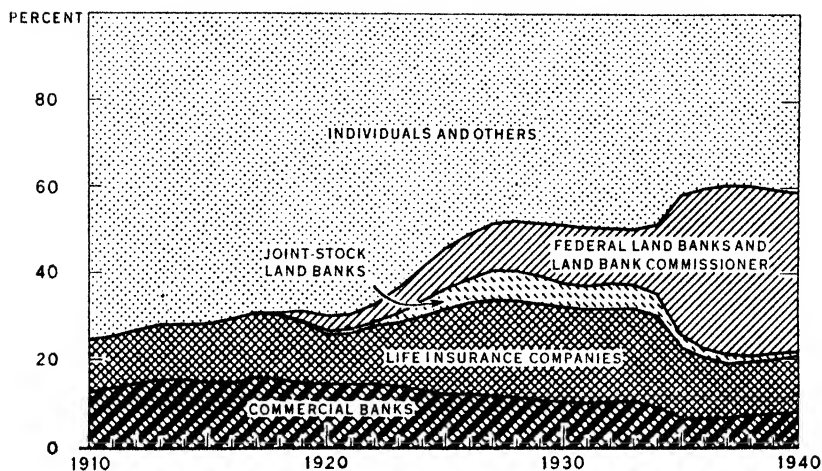
The accompanying charts suggest certain pertinent questions. If competition in farm-mortgage lending tends to come to a focus largely in interest rates, why has the spread between the rates charged by different lenders continued? In view of the wide difference during the 1920's between the rates charged by the Federal land banks, the joint stock land banks, and insurance companies on the one hand, and by commercial and savings banks, individuals, and other private lenders on the other, why did the first group of lenders hold only about 40 percent of the farm-mortgage debt at the beginning of 1933? Moreover, with current rates charged by these same lenders still much below those charged by local lenders, why do the Federal land banks, the Land Bank Commissioner, and life insurance companies even now hold only about one-half of the total?

THE answers appear to be found in part in the qualitative differ-

ences in the credit service furnished by different lenders. The Federal land banks and the joint stock land banks were restricted as regards the type of farm-mortgage credit service to be furnished. These restrictions were designed in part to provide a loan portfolio of sufficiently high quality, and sufficiently standardized, to serve as security for high-grade bonds. The extent to which these agencies, and later the Federal Farm Mortgage Corporation, have competed with local lenders has been determined in part by such restrictions. Life insurance companies have been most active in making relatively low-risk and low-cost loans in areas where a substantial volume of larger-than-average size loans was available. In part, therefore, self-imposed limitations have prevented these institutions from operating in full competition with local lenders. Local lenders have tended to make more of the small-size, short-term, high-risk, and otherwise high-cost loans, and their interest rates have reflected in part these qualitative differences in the credit service furnished.

Since the types of loans made by the land banks and insurance companies have been similar in many respects, there has been a tendency for competition among these institutions to take more the form of interest-rate competition. In recent years this competition has doubtless been in part an explanation of the reductions in rates charged by insurance companies on new farm mortgages. Although limited information on interest rates charged by local banks and individuals indicates some reduction in recent years, the reductions have not been as pronounced as for insurance companies. Local lenders apparently have continued to operate more in the type-of-credit strata less exposed to centralized lender competition.

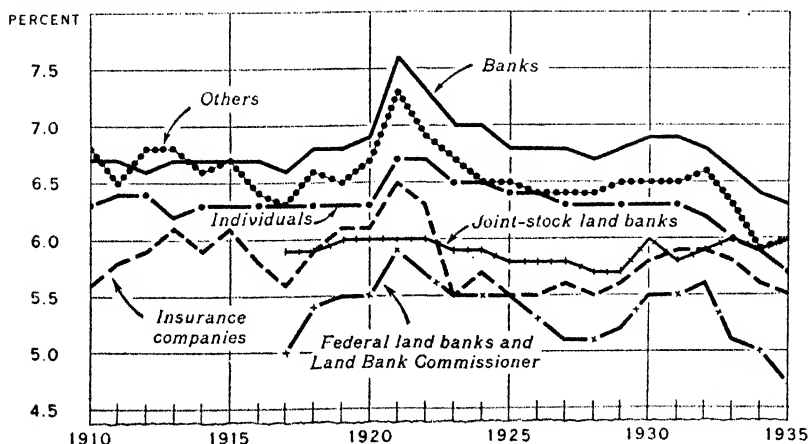
OUTSTANDING FARM MORTGAGE DEBT, PERCENTAGE HELD BY PRINCIPAL LENDER GROUPS, JANUARY 1, 1910-40



SOME evidence on the type-of-credit strata in which different lender groups have been most active is afforded by data on size and contract terms of mortgages recorded. According to estimates by the Farm Credit Administration, 25.5 percent of the number of all farm mortgages recorded in 1938 were for amounts of \$500 or less and 45.7 percent were for \$1,000 or less. For insurance companies, however, only 1.7 percent of their loans were for \$500 or less and only 5.7 percent were for \$1,000 or

less. For the Federal land banks and the Land Bank Commissioner the comparable percentages were 7.1 percent and 25 percent. Individual and commercial bank mortgage loans were in sharp contrast to those of the centralized lenders as regards size; 34.2 percent of the loans recorded by individuals and 27.3 percent of the loans recorded by commercial banks were for \$500 or less and 56.5 and 49.8 percent, respectively, were for \$1,000 or less. Data compiled by the Bureau of Agricultural Economics for the

AVERAGE RATES OF INTEREST CHARGED ON FARM MORTGAGE LOANS RECORDED BY VARIOUS LENDER GROUPS, UNITED STATES, 1910-35



period 1917-35 indicate similar differences in average size of loans made by the several lender groups.

No data for the years since 1935 have been compiled on the average contract terms of mortgage loans recorded, but data for selected periods, 1917-35, indicate that loans by commercial banks and individuals were for relatively short periods, those by insurance companies were for somewhat longer periods, and, of course, those by the land banks were relatively long-term loans. A noteworthy feature in regard to the trend of the average contract term of mortgage loans made by commercial banks and individuals was the tendency for the average to decline during the period 1917-35. This suggests that one effect of land bank and insurance company competition for loans in the 1920's was to shift away from local lenders those loans adapted to long-term lending, leaving the local lenders with an even larger proportion of their loans carrying shorter terms than previously. There apparently is little to support the thesis that land bank competition has tended to induce local lenders to grant longer term loans. The evidence seems rather to support the thesis that competition operated to cause local lenders to specialize more in those types of credit service that were not suited to the loan standards of the public and private centralized lending agencies.

IT is true, of course, that there have been significant changes in the interest rates charged by local lenders. Such changes, however, have to be interpreted in the light of other considerations in addition to competition of the centralized types of lenders. Changes in the character of the financing, and in the general money-market situation as it affects yields on alternative investments, are largely outside the field of direct interest-rate competition from the land banks and insurance companies. Thus the decline of interest rates charged by commercial banks during most of the 1920's, the rise in the late

1920's and early 1930's, and the subsequent decline during the 1930's may have been influenced more by these factors than by direct competition for mortgage loans.

It is difficult to say how much of the reduction during the early and middle 1930's in interest rates charged by banks and other local lenders reflected a reduction in the proportion of the loans made in the high interest rate areas, and how much of it was due to the fact that such lenders in other areas restricted their lending operations to loans that would justify low interest rates. The presence of such factors makes very difficult an interpretation of short-run trends in the interest rates charged by these lenders. For this reason the relative relationships of interest rates charged by different lenders over an extended period may be more significant than short-run trends as a measure of the extent of direct interest-rate competition.

It should be noted also that contract interest rates are not the best measure of differences in the total cost of credit from different lenders, as some lenders include most of the loan charges in the interest rate whereas others charge special fees and commissions in addition to the interest rate. It is possible, therefore, that interest-rate competition has been reflected in part in the absorption of certain of these special charges by the lender, and that the trends of effective interest rates charged by different lenders may have tended to converge somewhat more in the last two decades than is indicated by the accompanying chart on that subject. Nevertheless, there are still wide differences between the effective interest rates charged by local and centralized lenders, and one important factor tending to maintain these differences is the qualitative peculiarities in the type of credit furnished by the several types of lenders.

WHAT bearing do these considerations have on the prospects for further reductions in farm-mortgage

interest rates? For one thing, there is a real question as to how much a reduction in the interest rates charged by existing Federal mortgage credit institutions can be expected to benefit indirectly borrowers from those private lending institutions which now charge relatively high rates. Present borrowers from the Federal mortgage credit institutions would benefit directly, and others with mortgages conforming to the loan standards of those institutions would benefit indirectly through the competitive influence of the lower interest rate, but it is probable that type-of-credit stratification in the farm-mortgage credit market is sufficiently rigid to confine the indirect benefits of such federally sponsored

competition to a relatively small group. To obtain lower interest rates for all groups might require either that the federally sponsored credit units offer a loan service more directly in competition with local lenders or that methods other than federally sponsored competition be adopted. It would seem that any measures designed to reduce farm-mortgage interest rates for those now paying relatively high rates will have to take account of the competitive pattern of farm-mortgage lending and the reasons for the interest rates now charged by local lenders.

DONALD C. HORTON,
HAROLD T. LINGARD.

Regional Trends in Dairying

A CONSIDERABLE difference in the regional developments in dairying during the past several years is indicated by an examination of data showing changes in the number of milk cows and in the production and utilization of milk in each of the major type-of-farming regions in the United States from 1928 to 1939.

During the period 1928-39, there was a general rise in the number of milk cows in the United States, although the increase was not continuous throughout the period; increases were registered in each of the 12 major type-of-farming regions. The largest increase in number of milk cows (cows and heifers 2 years old and over kept for milk) occurred in the Cotton Belt. The increase in this region was almost 25 percent of the total increase in the United States. The increase in the dairy region was nearly as large as that in the Cotton Belt, and a fairly large expansion took place in the Corn Belt and the general farming region. These 4 regions accounted for more than 75 percent of the total national increase. Table 1

indicates the magnitude of the change in each region.

Much of the expansion in the number of milk cows in the Cotton Belt, and to a lesser extent in other regions, has resulted from a considerable increase in the number of herds of 3 cows or less. Information from the Census of Agriculture indicates that from 1929 to 1934 there was an increase of about 240,000 in the number of farms in the South reporting cows milked, and it is probable that further increases have occurred since then.

ALTHOUGH the rank of each region in number of milk cows was the same in 1939 as in 1928, there was much variation in some regions between the percentage of the national cow population in 1928, and the percentage of the total increase from 1928 to 1939. Thus, the Cotton Belt, which had about 13 percent of all milk cows in 1928, accounted for nearly 25 percent of the national increase in the following 11-year period. The increases in the self-sufficing and the tobacco and general farming regions

were also somewhat larger than might be suggested by the percentage of all cows in these regions in 1928. On the other hand, relatively small increases occurred in the wheat and small grains and the range livestock regions, and in certain subregions which were seriously affected by droughts in 1934 and 1936. The expansion in numbers in each of the remaining regions was roughly in accord with the number of milk cows at the beginning of the period.

ESTIMATES of milk production in 5 type-of-farming regions in 1928 and in 1938 indicate that the dairy, Cotton Belt, Corn Belt, wheat and small grains, and range livestock regions accounted for 23.6, 21.8, 19.2, 3.2, and 2.7 percent, respectively, of the total increase in milk production in the United States during this period. The expansion in milk production was larger in the dairy region than in the Cotton Belt, despite the fact that there was a larger increase in the number of milk cows in the Cotton Belt. Similarly, the increase in milk production in the Corn Belt was almost as large as that in the Cotton Belt notwithstanding a much larger increase in the number of cows in the Cotton Belt.

The utilization of the increase in milk production is of considerable significance in evaluating the importance of the expansion which has occurred. In some instances, the increase may be used on the farms where produced or to supply local fluid markets, both of which have a relatively small influence on the prices of dairy products in other regions. In other instances, the increase may be used in the manufacture of butter, cheese, or other products which may be readily shipped from one region to another. It is probable that utilization of this second type has a substantial influence on prices in other regions, although its actual importance, of course, would be dependent on the volume involved.

AN examination of the utilization of the increases in milk production from 1928 to 1938 in the three regions of largest increase—dairy, Cotton Belt, and Corn Belt—indicates that marked differences existed. In the dairy region the increase in the quantity of milk used in the production of manufactured dairy products in plants was equivalent to about 95 percent of the increase in milk production. In the Corn Belt the quantity of milk used in the production of manu-

Table 1.—Number and Increase of Milk Cows on Farms by Major Type-of-Farming Regions in the United States, 1928–39, and Percentage of National Increase in Each Region

Region	Milk cows ¹		Increase		Percentage of total national increase
	1928	1939	Number	Percentage	
	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Percent</i>	<i>Percent</i>
Dairy.....	5,572	6,253	681	12.2	23.9
Corn Belt.....	4,752	5,158	406	8.6	14.3
Cotton Belt.....	2,904	3,612	708	24.4	24.9
General farming.....	1,992	2,337	345	17.3	12.1
Mixed farming.....	1,793	1,950	157	8.8	5.5
Wheat and small grains.....	1,687	1,741	54	3.2	1.9
Fruit and mixed farming.....	1,001	1,133	132	13.2	4.6
Range livestock.....	988	1,031	43	4.4	1.5
Special crops.....	849	955	106	12.5	3.8
Tobacco and general farming.....	774	894	120	15.5	4.2
Self-sufficing.....	375	457	82	21.9	2.9
Truck.....	139	151	12	8.6	.4
United States ²	22,231	25,088	2,857	12.9	100.0

¹ Milk cows and heifers 2 years old and over kept for milk.

² The regional numbers add to a slightly different total due to some overlapping of regional boundaries.

Computed from data from U. S. Department of Agriculture, Agricultural Marketing Service.

factured dairy products increased more than the production of milk. This came as a result of decreases in the quantity of milk used to make farm butter and to supply urban fluid markets, which decreases were only partly offset by an increase in the consumption of fluid milk on farms in the region. In the Cotton Belt, on the other hand, it appears that between 35 and 40 percent of the increased production was used in fluid form or to make farm butter. Thus, only about 60 to 65 percent of the increased milk production was used in the commercial manufacture of dairy products.

It may be pointed out that the dairy region increased butter production by a larger quantity than did any other region during the period from 1928 to 1938, and the Corn Belt showed the largest absolute increases in the production of American cheese and evaporated milk.

THE large increase in the number of farms reporting cows milked may be judged an important factor in explaining the somewhat smaller portion of milk supplies going into manufactured dairy products in the Cotton Belt. Much of the milk production on these farms is probably used on the farms where produced. Data for the South as a whole indicate that the per capita consumption of fluid milk and of certain manufactured dairy products is still considerably below the national average, and it is quite probable that a large part of additional production in many parts of the region will be consumed locally. It has been estimated that it would require approximately 3.1 million cows to supply the farm population of the South with the dairy products needed for a minimum adequate diet. The number of cows used for this purpose in 1937 was about 2.3 million.¹

¹ Steanson, Oscar, and Lansford, E. L., Food, Feed, and Southern Farms. Bur. Agr. Econ. November 1939. (Mimeographed.)

THE rapid increase in the number of milk cows and milk production in the Cotton Belt is the result of many forces, several of which are important throughout the region. The shift from cotton to feed crops and pasture, and the decreases in the number of work and beef animals are examples of changes that have been widespread. Much of the increase in commercial milk production, however, appears to have centered in a few areas within the region, and an examination of the changes in three of these areas—northeastern Texas, south central Tennessee, and east central Mississippi—indicates that the expansion has been due in part to factors of local importance. Dairying developed somewhat earlier in these areas than in the Cotton Belt as a whole, because of the presence of factors quite favorable to dairying or because of certain difficulties, such as weed and insect infestation, in the production of cotton, which were of somewhat greater importance in these areas than in other areas in the region. It is probable that this earlier development has made it somewhat easier for the farmers in these areas to shift further from the production of cotton to dairy farming in recent years.

W. F. FINNER.

SHARE Studies by the Bureau of Agricultural Economics show that in 1940 farmers received 6.2 billion dollars for producing the foods bought by American consumers. Consumers spent 14.8 billion dollars for these foods. The difference, totaling 8.6 billion dollars, went to railroads, truckers, processors and manufacturers, wholesalers, retailers, bankers, and other middlemen. On the average the farmer got 42 cents of the consumer's food dollar. The marketing system took 58 cents.

Shifts in Production of Hay

THE number of acres of hay harvested annually in the United States the past few seasons is about the same as that during 1909-14; nevertheless, important changes have occurred in production of the different kinds of hay. Two trends are apparent. Wild hay is becoming less important and legume hays more important in hay production.

From an average of 17 million acres in 1909-14, the harvested acreage of wild hay fell to an average of 11.3 million acres in 1937-39. During the same period, the harvested acreage of tame hay increased from 50.3 million to 56.6 million. Thus, the total acreage of hay harvested has remained relatively stable. But the shift to legume hays, such as alfalfa and lespedeza, has been so widespread that the added acreage of these tame hays has offset not only the acreage decline in wild hay but also a large part of the reduction in clover and timothy acreage.

ALFALFA hay was harvested on 13.5 million acres in 1939, a gain of nearly 1.8 million acres over the average of 1928-32. About 85 percent of this gain occurred in the 12 North Central States, which harvested approximately 55 percent of the alfalfa hay acreage in the United States in 1939. Within this group of States, Michigan, Wisconsin, and Minnesota showed the greatest expansion of acreage, more than enough to offset the reductions of acreage in North Dakota, South Dakota, Nebraska, and Kansas. The recent drought cycle severely damaged alfalfa in the Great Plains and the Far West. In part, alfalfa acreage has declined in these States because alfalfa will not grow on land where the subsoil moisture has been exhausted. Except under irrigation, it will probably be many years before alfalfa can be successfully grown again on such land, even with conditions of normal rain-

fall. Other regions of the United States have expanded alfalfa hay acreage.

Soybean, cowpea, and peanut vine hays are showing a rapid increase. The 1939 acreage of these legume hays in the United States was 8.2 million acres, an increase of 3.3 million acres above the average of 1928-32. Only the States of the West, New England, and the Northern Great Plains are not growing these hays. Soybean hay is grown in the more northerly States and is increasing most in the Corn Belt States (particularly in Iowa, Ohio, Wisconsin, and Minnesota), although Illinois still was harvesting the largest acreage in 1939.

THE most rapidly expanding tame hay is lespedeza, a legume. From an average of 0.5 million during 1928-32, the acreage of lespedeza harvested for hay had increased to 3.7 million in 1939. Not only has lespedeza been increasing in Kentucky, Tennessee, Alabama, Mississippi, Arkansas, and Louisiana—where it was grown for hay prior to 1925—but it also has spread northward into the Corn Belt as improved varieties have been developed. In 1939, nearly 1.2 million acres of lespedeza were harvested for hay in the North Central States, but in 1936 only 56 thousand acres were reported. The expansion has been especially rapid in Missouri; the acreage of lespedeza harvested leaped from 40 thousand acres in 1936 to 800 thousand in 1939, Missouri thus accounting for approximately one-third of the gain in lespedeza hay acreage for all States during this period. Lespedeza also has spread into the Southern States along the Atlantic Coast.

In contrast with the shift to legume hays has been the shift away from mixed clover and timothy hay. In 1939, 20.8 million acres of clover and timothy were harvested, a decline of 6 million from the average of 1928-32. Of this decrease in timothy and clover,

approximately 80 percent occurred in the North Central States, particularly in Iowa and Missouri. Because the acreage in this hay has decreased less in the New England States, these States have an increasing percentage of the total acreage. By 1939, this percentage reached 34 but the North Central States still ranked first with 53 percent.

THE reasons for shifts in types of hays produced are varied. The tractor, truck, and automobile have made possible a reduction of 10 million horses and mules on farms; the demand for clover and timothy hay, which is considered an important roughage for workstock, has thus diminished. In addition, clover and timothy do not yield so heavily as alfalfa.

Alfalfa hay, exceeded in acreage only by clover and timothy, is valued highly. It is rich in protein, calcium, and vitamins A and D, and is well-liked by all kinds of livestock. Alfalfa not only produces large yields in tons per acre—the 1928-32 average yield for the United States was 2 tons an acre—but is superior to most roughages in digestibility. At the 1928-32 average yields for the United States, alfalfa produces twice as many pounds of digestible nutrients on an acre as clover and timothy, and over four times as many pounds of digestible protein. In the areas of the Corn Belt where both alfalfa and corn are well adapted, alfalfa produces more feed on an acre, in terms of total digestible nutrients at average yields per acre, than does corn harvested for grain, a ton of alfalfa being equivalent in digestible nutrients to 20-25 bushels of corn.

IN addition to the superior feeding qualities of legumes, these crops are recognized as aids in preventing depletion of soil fertility. Because of the fixation of free nitrogen by bacteria associated with legumes, these crops either add to the nitrogen content of

the soil, or aid in offsetting depletions of nitrogen required in plant growth. Legumes thus become an important part of the effort to conserve soil resources, and the action programs in agriculture undoubtedly have accentuated this shift to legumes. The provision of limestone and superphosphate in lieu of cash payments for compliance has aided in removing a barrier to the growth of legumes; payments for new seedings also have an influence. Much of this expansion, of course, is not used for hay; however, if the need for a greater acreage of hay arises, legume pasture may be diverted in part to hay production.

Another factor aiding in the spread of legumes is the improvement in varieties by plant breeders. Improved varieties not only yield better, but have been adapted to greater ranges in climatic conditions; resistance to disease also has been strengthened. Lespedeza has spread northward in part because of improved varieties; its ability to grow on poor soil without first liming and its success in a rotation with small grain also are important factors.

SHIFTS in hay production now co-scurring mean more hay and higher quality hay per acre. It has been estimated that acreage shifts in tame hays in the North Central States have increased the normal acre yield of tame

Acreege of Hay, by Kinds, Harvested in the United States, 1928-32, 1938, 1939 ¹

Type of hay	Average 1928-32	1938	1939 ¹
	1,000 acres	1,000 acres	1,000 acres
Wild hay.....	13, 288	11, 826	10, 898
Tame hay.....	55, 153	56, 925	58, 347
Clover and timothy.....	26, 872	21, 342	20, 828
Alfalfa.....	11, 720	13, 478	13, 494
Soybean, cowpea, and peanut vine.....	4, 932	7, 537	8, 266
Grains cut green.....	4, 174	3, 671	3, 800
Lespedeza.....	504	2, 851	3, 692
Miscellaneous.....	6, 950	8, 046	8, 267
All hay.....	68, 441	68, 751	69, 245

¹ Crops and Markets.

² Preliminary.

hay by 7 percent.¹ These shifts to higher quality, heavier-yielding tame hays reinforce the trend toward more roughage caused in part by mechanization, which is releasing feed by reduc-

¹ Mighell, R. L., *Economic Aspects of Hybrid Corn*—Further considered, *Journal of Farm Economics*, August 1939, pp. 661-665.

ing the number of workstock, and in part by diversion of acreage from soil-depleting crops. A greater production of beef and dairy products is likely, and unless consumption of these products is expanded, prices will tend to fall.—ALBERT A. THORNBROUGH.

More Cattle, Fewer Hogs

INVENTORY of livestock on farms January 1 showed more cattle and sheep than a year earlier; fewer hogs, chickens, turkeys, horses, and mules. In terms of animal units or feed requirements, livestock numbers during 1940 decreased 4 percent—the increase in cattle and sheep not being large enough to offset the decrease in other livestock.

Cattle: Number of cattle totaled 72 million head, compared with 69 million in 1940, and with 67 million average for the 10 years 1930-39. These cattle included 26 million head of milk cows, compared with 25 million in 1940, and with 25 million average for the preceding 10 years. Total farm value of cattle was 3.1 billion dollars this year, compared with 2.8 billion in 1940, and with 2.1 billion average for 1930-39.

The number of cattle and calves on farms January 1, 1941 was 2.9 million head larger than a year earlier, and about 5.6 million head larger than at the recent low point in early 1938. Cattle numbers were reduced about 8 million head from early 1934 to early 1938, chiefly because of the droughts of 1934 and 1936. But the increase since early 1938 has carried the total to a figure only 2.6 million head less than the record total of early 1934. Since feed supplies are abundant in most areas, further increases are expected in the number of cattle. The 1934 level probably will be exceeded within the next 2 or 3 years.

Sheep: Fifty-six million sheep were on farms January 1 this year, compared with 55 million in 1940, and with 53 million average for the preceding 10 years. Total farm value this year was 376 million dollars, compared with 344 million in 1940, and with 279 million average for the preceding 10 years.

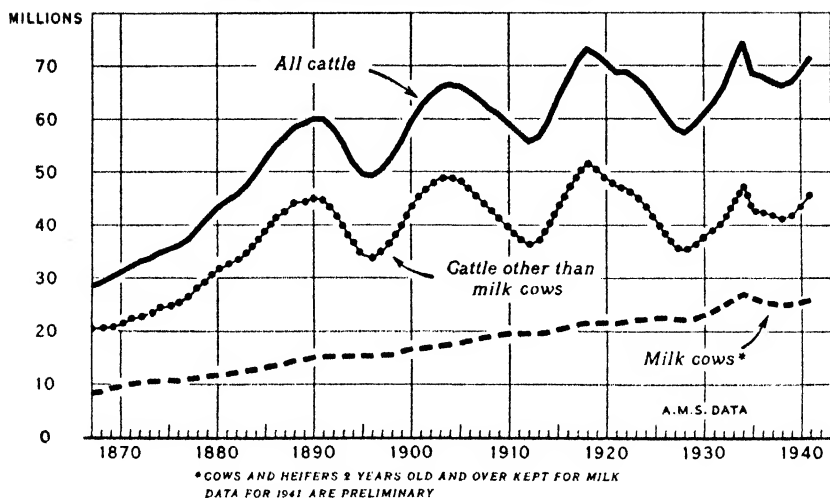
Hogs: The number of hogs totaled 53 million on January 1 this year, compared with 60 million in 1940, and with 51 million average for the preceding 10 years. Total farm value was 440 million dollars in 1941, compared with 470 million in 1940, and with 459 million average for 1930-39.

Chickens: The number of chickens on farms totaled 414 million for 1941, compared with 429 million in 1940, and with 424 million average for 1930-39. Total farm value this year was 270 million dollars, compared with 259 million in 1940, and with 277 million average for the preceding 10 years.

Turkeys: Turkeys also showed a reduction in numbers—7 million in 1941, compared with 9 million in 1940, and with 6 million average for the preceding 10 years. Total farm value of turkeys this year was 16 million dollars, against 19 million in 1940, and 14 million average for 1930-39.

Horses: Horses were fewer and the total farm value smaller this year than last: 10 million horses on farms on January 1, compared with 11 million in 1940, and with 12 million average for the preceding 10 years. Total

ALL CATTLE: NUMBER ON FARMS JANUARY 1, UNITED STATES, 1867-1941



farm value of horses: 707 million dollars in 1941, compared with 820 million in 1940, and 901 million average for the preceding 10 years.

Mules: There were 4.2 million mules on farms on January 1 last, compared

with 4.3 million in 1940, and with 4.9 million average for 1930-39. Total farm value of mules was 448 million dollars in 1941, against 494 million in 1940, and 454 million average for the preceding 10 years.

United States: Exports and Imports of Specified Agricultural Commodities, September-January 1939-40 and 1940-41 and January 1940 and 1941¹

Commodities	Unit	September-January		January	
		1939-40	1940-41	1940	1941
Exports:					
Pork:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>
Cured pork ²	Lb.	30,888	5,606	12,301	1,157
Other pork ³	Lb.	38,156	10,460	16,286	1,118
Total pork.....	Lb.	69,044	16,066	28,587	2,275
Lard, including neutral.....	Lb.	116,396	56,351	27,988	13,666
Wheat, including flour.....	Bu.	19,612	15,605	2,650	1,864
Apples, fresh ⁴	Bu.	2,297	521	244	64
Pears, fresh.....	Lb.	62,093	13,128	3,230	929
Tobacco, leaf.....	Lb.	158,937	55,088	33,941	13,307
Cotton, excluding linters (500 lb.).....	Bale	4,171	634	1,086	59
Imports:					
Cattle.....	No.	243	272	70	78
Beef, canned, including corned.....	Lb.	37,677	19,923	8,407	5,363
Hides and skins ⁵	Lb.	139,861	179,193	30,116	41,067
Barley malt.....	Lb.	29,510	15,540	4,728	3,397
Sugar, cane (2,000 lb.).....	Ton.	1,241	1,006	191	279
Flaxseed.....	Bu.	3,689	4,072	1,058	1,482
Tobacco, leaf.....	Lb.	25,810	27,710	5,520	6,053
Wool, excluding free in bond for use in carpets, etc.	Lb.	75,194	157,441	24,990	52,712

¹ Corrected to March 5, 1941.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled or salted, and canned pork.

⁴ Includes baskets, boxes, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records, Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935- 39=100) ¹	Income of industrial workers (1924- 29=100) ²	Cost of living (1924- 29=100) ³	Wholesale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in —				
					Living	Pro- duc- tion	Living and produc- tion		
1925	91	98	101	151	164	147	157	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	158	147	153	180	281
1930	91	85	96	126	148	140	145	167	277
1931	75	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	75	96	109	108	109	85	187
1934	75	61	77	109	122	125	123	95	178
1935	87	69	79	117	124	126	125	103	180
1936	103	80	80	118	122	126	124	111	182
1937	113	94	83	126	128	135	130	126	187
1938	88	73	81	115	122	124	122	123	186
1939	108	83	80	113	120	122	121	123	190
1940	122	94	81	116	121	124	123	126	
1940—February	116	89	81	115			122		
March	113	87	81	114	121	125	123		
April	111	86	81	115			123	124	
May	115	87	81	114			123		
June	121	89	81	113	121	125	123		
July	121	91	81	113			122	129	
August	121	95	81	113			122		
September	125	98	81	114	121	123	122		
October	129	100	81	115			122	129	
November	132	103	81	116			122		
December	138	107	81	117	122	125	123		
1941—January	139	109	81	118			123	124	
February				118			123		

Year and month	Index of prices received by farmers (August 1909–July 1914=100)							Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	
1925	157	177	172	153	140	153	163	99
1926	131	122	138	143	147	152	159	94
1927	128	128	144	121	140	155	144	91
1928	130	152	176	159	151	158	153	96
1929	120	144	141	149	156	157	162	95
1930	100	102	162	140	133	137	129	87
1931	93	63	98	117	92	108	100	70
1932	44	47	82	102	63	83	82	65
1933	62	64	74	105	60	82	77	61
1934	93	99	100	103	68	95	59	64
1935	103	101	91	125	118	108	117	86
1936	108	100	100	111	121	119	115	92
1937	128	95	122	123	132	124	111	93
1938	74	70	73	101	114	109	108	78
1939	72	73	77	105	110	104	94	77
1940	85	81	79	114	108	113	96	80
1940—February	91	85	76	150	101	118	98	83
March	92	85	73	118	102	114	83	79
April	96	85	81	128	104	110	82	80
May	92	83	88	117	108	106	84	80
June	83	81	104	112	102	104	81	77
July	78	80	89	98	110	105	88	78
August	76	77	79	107	110	109	90	79
September	77	76	73	114	114	111	104	80
October	80	78	79	99	112	116	112	81
November	83	79	71	98	112	121	120	81
December	81	79	75	93	111	128	122	83
1941—January	84	80	78	117	130	121	100	85
February	81	80	80	156	130	118	90	84

¹ Federal Reserve Board, adjusted for seasonal variation. Revised August 1940.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports. Revised.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909–July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects: The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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FARM SKIES ARE A LITTLE BRIGHTER. Domestic consumer demand for farm products is rising as industrial production and employment expand under programs for national defense. To this has been added now the purchasing program covering farm products for export under provisions of the Lease-Lend Act. * * * The agricultural plant is in top physical condition to provide for domestic and foreign needs. Besides abundant resources for the production of food, feed, and fibers large stocks have been laid by for emergency needs. These include large stocks of cotton, wheat, and tobacco. Large supplies of feed grains are available for conversion into meats and other livestock products. Large supplies of fats and oils already exist. A new planting season is well under way, and farmers have reported approximately the same acreages to be grown this year as last. * * * Prices of all farm products combined average the highest in 4 years. In especially good position are the livestock and dairy industries. Less satisfactory is the price situation as to cotton and wheat. Total farm income—rising seasonally now—is expected to exceed 1940 figures.

Commodity Reviews

DEMAND: Improvement

ADDITIONAL improvement in domestic consumer demand for farm products is in prospect for the remainder of this year. The improvement probably will be more gradual than during the last half of 1940, when industrial activity, employment, and consumer incomes were rising so sharply; nevertheless, the total demand will likely be in new high ground since the outbreak of the European War in the autumn of 1939.

Recent gains in consumer demand for farm products have been principally the result of increased industrial production for national defense and export to Great Britain. But the full beneficial effects of the national defense program have not yet been realized. Military expenditures are still rising. These expenditures totaled 24 million dollars a day in March, or more than three times the daily average of last September. Production in new defense plants to be completed in large number by midyear will become increasingly important.

At the outbreak of European War there was a sharp increase in United States exports of farm products—principally cotton exports. Exports subsequently declined, and this has offset to some extent the effects of the substantial gains in domestic demand for farm products on farm prices and income. New developments—passage of the Lease-Lend Act, the possibility of increased food shipments to unoccupied France and to Spain, and new dollar credits to Finland—suggest some improvement in the export situation.

P. H. BOLLINGER.

INCOME: Rising

Cash farm income is rising seasonally now, and the total from marketings and Government payments will prob-

ably be larger in the second quarter of this year than in the like period of 1940. Basis for this is the expectation that income from livestock and livestock products will continue to show substantial increases over the corresponding months of last year, that income from crops also will increase. Government payments will be smaller.

Total during the first quarter was slightly larger than in the like period of 1940. Income was about the same this January and February as last but the total in March was a little larger than in March last year. Returns from marketings of grains, vegetables, and tobacco were smaller in the first 2 months of this year compared with last; income from cotton and cottonseed, fruits, meat animals, dairy products, and poultry and eggs was larger.

Cash income from crops usually declines through April, then increases until October. Possibly the low point for this year was in February. Higher wheat prices in March made profitable in some areas the redemption of wheat under Government loan, and this probably added to income in that month. Income from truck crops is likely to increase more than seasonally as the spring market gets underway.

The following table gives totals for the first 2 months of 1941, with comparisons for previous years.

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
February:			
1941.....	547	82	629
1940.....	545	98	643
1939.....	471	56	527
1938.....	483	31	514
January-February:			
1941.....	1,214	169	1,383
1940.....	1,162	224	1,386
1939.....	1,064	97	1,161
1938.....	1,126	48	1,174

PRICES: Higher

Prices of farm products average around the high point since the outbreak of the European War. The index as of mid-March was 103, but there were subsequent gains when wheat prices advanced to the best level

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
March.....	97	123	79
April.....	98	123	80
May.....	98	123	80
June.....	95	123	77
July.....	95	122	78
August.....	96	122	79
September.....	97	122	80
October.....	99	122	81
November.....	99	122	81
December.....	101	123	82
1941			
January.....	104	123	85
February.....	103	123	84
March.....	103	123	84

¹ Ratio of prices received to prices paid.

for the season. Prices of truck crops and cotton went up, but hogs were selling lower than at the turn of the new calendar year. The mid-March index of prices of all products combined was 6 points higher than at that time last year.

The outlook is for a higher average of prices of farm products this year than last, since signs of improvement in domestic consumer demand have not diminished, and to this has been added the prospect for increases in exports of farm products over the recent low volume. Among the major groups of products, grains, cotton and cottonseed, and fruits sell considerably below pre-World War averages. These would have to advance considerably to raise the purchasing power of all farm products combined to pre-war figures.

Products selling highest in relation to pre-war values are meat animals, dairy products, and truck crops.

PLANTINGS: Intentions

Farmers the country over have reported their planting intentions for 1941. Significant are the changes to

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	March average, 1910-14	March 1940	February 1941	March 1941	Parity price, March 1941
Cotton, lb.....	cents.. 12.4	12.4	9.96	9.44	9.72	15.87
Corn, bu.....	64.2	61.3	56.0	56.0	57.1	82.2
Wheat, bu.....	do.. 88.4	88.9	85.0	67.8	71.8	113.2
Hay, ton.....	dollars.. 11.87	12.06	18.23	7.88	7.93	15.19
Potatoes, bu.....	cents.. 60.7	67.5	77.0	54.6	53.8	287.6
Oats, bu.....	39.9	40.3	38.6	32.9	33.7	51.1
Rice, lb.....	do.. 81.3	(9)	63.3	96.3	97.1	104.1
Apples, bu.....	96	1.11	.85	.93	.97	1.23
Beef cattle, cwt.....	5.21	5.29	7.16	8.34	8.28	6.67
Hogs, cwt.....	7.22	7.41	7.87	7.19	7.08	9.24
Chickens, lb.....	cents.. 11.4	11.4	12.8	14.0	14.4	14.6
Eggs, doz.....	21.5	19.6	15.4	16.8	16.4	21.8
Butterfat, lb.....	do.. 26.3	27.1	28.3	30.5	30.7	35.0
Wool, lb.....	do.. 18.3	18.7	27.3	32.1	33.4	23.4
Veal calves, cwt.....	dollars.. 6.75	6.92	8.81	10.11	9.74	8.64
Lambs, cwt.....	5.87	6.22	8.05	8.60	8.92	7.51
Horses, each.....	do.. 136.60	138.40	78.20	70.40	69.60	174.80

¹ Revised. ² Post war base. ³ Prices not available. ⁴ Adjusted for seasonality.

be made in acreages of various cash crops in response to price changes. Some rather large reductions in spring crops are indicated in parts of the West where much improved moisture conditions last fall permitted the planting of an increased acreage of winter wheat.

For the country as a whole the most important decreases indicated are in spring wheat, grain sorghums, corn, barley, potatoes, soybeans, flaxseed, dry edible beans, and tobacco. (Acreage planted to corn would be the smallest in more than 40 years; potatoes, the smallest since 1926.) Principal increases include oats, tame hay, sweetpotatoes, and cowpeas. Reports on peanuts show prospects for about the same acreage as last year. The net decreases indicated for these crops will probably be about offset by an increase of 3 million to 4 million acres of winter wheat and rye.

AMS says that after allowing for shifts between similar crops, most of the changes from last year's acreages appear rather small. The intended increase in oats partially offsets the indicated decreases in barley, corn, and grain sorghums, leaving only about a 1-percent decrease in plant-

ings of feed grains. The decrease in spring wheat offsets part of the increase in winter wheat, indicating a total wheat acreage perhaps 1 million acres above that of last year, and 4 million acres below the average of the last 20 years. The indicated acreage of tame hay is the largest on record.

COTTON: Higher

Cotton has been selling slightly higher than at corresponding dates last year, in response to a continuing high level of cotton mill consumption. Recently consumption has been at an annual rate of 9½ million bales. Total domestic consumption for 1940-41 will probably be between 9 and 9.5 million bales. Recent exports have been small. Exports from August through March totaled only 780 thousand bales, as compared with more than 5 million bales in the like period of 1939-40.

British cotton mill activity has been reduced by Government restrictions designed to release labor and power for use in munitions plants. This reduces the demands of the British cotton industry for shipping space and foreign exchange. Cotton mill consumption in Japan and the remainder of the Orient is unusually small, but consumption in Canada and India is at near-record high levels.

The supply of all growths of cotton in the United States for the 1940-41 season was slightly more than 23 million bales. With prospects for consumption and exports estimated at less than 10.5 million bales, the carry-over on August 1 next would be above 12.5 million. This would be over 2 million bales more than at the beginning of the current season on August 1 last. The largest carry-over on record was 13 million bales in 1939.

WHEAT: Big Supply

The domestic wheat supply for 1941-42 is tentatively placed at about 1,200 million bushels, based on a winter wheat crop indicated as of December 1 at about 633 million bushels, a spring

United States: Planted Acreages 1930-39 and 1940, and Prospective Plantings for 1941

Crop	Average 1930- 39	1940	Indi- cated 1941	1941 as per- cent of 1940
	<i>Thou- sands</i>	<i>Thou- sands</i>	<i>Thou- sands</i>	
Corn, all.....	101,081	88,143	87,656	99.4
All spring wheat.....	21,762	18,547	17,137	92.4
Durum.....	3,418	3,431	2,925	85.3
Other spring.....	18,344	15,116	14,212	94.0
Oats.....	39,196	36,237	37,102	102.4
Barley.....	12,713	14,759	14,348	97.2
Flaxseed.....	2,406	3,403	3,341	98.2
Rice.....	843	1,090	1,154	105.9
Grain sorghums, all.....	8,674	10,978	9,679	88.2
Potatoes.....	3,865	3,104	2,988	96.3
Sweetpotatoes.....	882	772	835	106.2
Tobacco.....	1,678	1,427	1,404	95.4
Beans, dry edible.....	1,942	2,009	1,855	92.3
Soybeans ¹	6,467	10,528	9,788	93.0
Cowpeas ¹	2,647	3,120	3,217	103.1
Peanuts ¹	1,951	2,390	2,396	100.3
Tame hay ²	56,102	61,592	62,398	101.3

¹ Grown alone for all purposes. Partly duplicated in hay acreage.

² Acreage harvested.

wheat crop of 180 million bushels (computed on the basis of average yields on the prospective plantings), and a carry-over on July 1, 1941 estimated at about 380 million bushels. A supply of 1,200 million bushels would be second only to the high record of 1,250 million bushels in 1931-32.

As for the utilization of this near-record supply of wheat, it is expected that domestic disappearance will total about 675 million bushels, leaving 525 million for export and carry-over. Exports will probably be larger than the 30 to 35 million bushels shipped out of the country this year; even so, the carry-over on July 1 a year hence will likely set a new high record.

Wheat has been selling lower this season than last, but prices are expected to continue to average relatively high as compared with prices in other surplus-producing countries so long as the Government loan and export subsidy programs are continued. A Government loan on the new crop soon to be harvested in this country is dependent upon a favorable vote in the national marketing quota referendum tentatively announced for May 31.

The world wheat crop may be about the same this year as last. Some increase in Europe and Australia is in prospect, but this may be counter-balanced by reductions in Argentina and Canada.

FEED: Plentiful

Supplies of all kinds of feed are more than enough for current domestic needs. The surplus in Government and private storage makes large supplies available for any expansion which may be desired in the production of livestock products for export under provisions of the Lease-Lend Act. Such an expansion may reduce earlier estimates of the carry-over of old corn at the end of the present marketing year. The carry-over, however, will still be large—probably fully as large as the record carry-over on October 1 last. Expansion in production

of livestock products would result in increased consumption of byproduct feeds, which are in large supply on account of the loss of continental European markets for such feeds.

Feed requirements for domestic production of livestock and products are smaller this year than last, since there are approximately 4 percent fewer grain-consuming animals on farms. The reduction is principally in hogs, production having been diminished because of the unfavorable relationship between hog prices and corn prices during the past year. This ratio is now above the long-time average, a situation that forecasts a larger pig crop this fall than last.

CATTLE: Up

More cattle will probably be marketed this year than last, but prices are expected to average higher on account of improved consumer demand and a reduction in total livestock slaughter. (Total livestock slaughter will be smaller this year because of the sharp reduction in production and marketings of hogs.)

The number of cattle on feed last winter was close to the largest on record. This indicates relatively large supplies of grain-fed cattle this summer and fall, but the peak in marketings may be a little later than usual since a large proportion of the cattle shipped into the Corn Belt last fall and early winter were lightweight stockers and feeders. Meanwhile, the number of cattle on farms and ranches continues to increase.

Cattle on farms totaled 71.7 million head on January 1. The largest number on record was 74.3 million head in 1934. In some States, particularly the Corn Belt, cattle numbers are above the 1934 level, but in the Great Plains area they are still substantially below the 1934 figure. Since cattle prices are high in relation to prices of feed and other farm products, it is expected that farmers and ranchers will continue to build up herds for 2 or 3 more years.

The 1934 peak in cattle numbers will probably be exceeded before a downward trend in numbers gets under way.

HOGS: Outlook

Outlook for hog production and prices has not changed materially in recent months. **Production:** Substantially smaller this spring than last. **Prices:** Substantially higher. **Hog-Corn Price Ratio:** Favorable to hog producers, resulting in increased production of pigs next fall, and in the spring of 1942.

Current prices—considerably higher than in the spring of 1940—reflect last year's reduced pig crops. Hogs marketed from April through September will be 15 percent smaller in volume this year than last. Hogs on farms January 1 totaled 53 million head, about 7 million head fewer than a year earlier. There is close relationship between hog slaughter during the January-September period and hog numbers on January 1. Slaughter under Federal inspection during this period will total about 30 million head. Slaughter in the same period last year was 34 million head.

Domestic consumer demand for meats is increasing; to this must be added prospects for exports to Great Britain under the provisions of the Lease-Lend Act. Storage stocks of pork are much larger than at this time last year, but the total supply of pork—storage stocks plus marketings—is smaller than in 1940. The supply and demand situation seems to point unmistakably to higher prices to producers this year than last.

LAMBS: Increase

The 1941 lamb crop may be the largest on record, exceeding slightly the 32.7 million head raised last year. This is indicated by an increase of nearly 500 thousand breeding ewes on farms and ranches January 1 this year compared with last. Sheep wintered well in the Western Sheep States, and

are in better condition this spring than last. Spring feed conditions are generally favorable, and the number of lambs saved per 100 ewes will be at least as large as the number saved last year.

Marketings of sheep and lambs for slaughter are expected to increase seasonally this month and next, and the total will be a little larger than during the same period last year. The number of early lambs marketed before July 1 probably will be larger this year than last. Even so, prices will be supported by the improved consumer demand for meats and by higher prices for wool. Both lambs and wool are among the few farm commodities selling higher than parity.

WOOL: Active

A new wool marketing season is underway, with conditions pointing to higher prices and larger income to producers this year than last. Domestic production may set a new high record of more than 450 million pounds of shorn and pulled wool. Production in 1940, only slightly below this figure, yielded producers a cash income of better than 110 million dollars. This compares with 84 million dollars in 1939.

Mills readily consumed the 1940 clip at prices higher than in 1939, and took on as well the largest volume of imports since 1923. Despite the larger supply of wool—domestic production plus imports—the stocks of raw wool in this country on April 1 were smaller than the average for recent years. Mill consumption will probably be larger this year than last, in view of current and prospective military and civilian needs.

Total supplies of wool in foreign countries, available for shipment to the United States, are relatively large. Since shipments of wool to European countries have been largely cut off by the British blockade, the only important markets for exports from the

Southern Hemisphere are the United States, Great Britain, and Japan.

POTATOES: Big Supply

Twenty-four thousand acres were planted to potatoes in the first section of early States this season. This was about 10 percent more than in 1940. Growers in the second section of early States indicated intentions to increase their plantings by 5 percent. Production may be increased more than the acreage change alone would indicate. (Average yields per acre have been rising as a result of the introduction of higher yielding varieties in the early producing States in recent years.) The market supply of potatoes will probably be larger this spring than last. Prices are below those of a year ago.

TRUCK CROPS: Reduced

Market supplies of truck crops have been smaller than had been expected earlier in the season. It was indicated then that the combined acreage of 1941 truck crops for harvest during the winter and spring was 5 percent larger this year than last. Bad weather intervened, but it was expected in early March that with average growing conditions through early April the supplies of truck crops should become moderately plentiful. Some truck crops have been selling higher than in early 1940, favored by the smaller supply and by improved consumer demand. * * * Shipments of canned vegetables have been heavy this marketing season, the carry-over is smaller than is usual at this time of year, and acreages planted this year probably will be larger. Prices and income to growers should be higher this year than last.

DAIRYING: Good Year

Signs point to a good year for dairymen. Production of milk will probably set a new high record, the do-

mestic demand for dairy products is increasing, and to this has now been added the prospect for larger shipments of concentrated dairy products to Great Britain. Prices to dairymen and the manufacturers of dairy products are higher than at this time last year. Cash income to dairymen will probably exceed 1.5 billion dollars in 1941, or almost one-sixth of the total cash income to producers of all farm products.

Estimates are that there are approximately 26 million milk cows on farms. The largest number on record was 27 million in 1934. Probabilities are that this number will be exceeded in the next few years, since the number of young dairy stock on farms already is the largest on record. Much depends, of course, on the supply and prices of feed during this period, and the continuance of a high level of demand for milk and dairy products.

FATS, OILS: Prices Up

Production of domestic fats may be smaller this year than last, principally on account of reduced production of lard. Already the reduction in hog production is being reflected in a smaller output of lard; prices of lard have advanced sharply in recent months, and now average higher than at this time last year.

Considerably less lard will be produced this year than last, but storage stocks—totaling 317 million pounds—on March 1 were the largest on record for that date. Stocks will probably continue to increase through June. Even though exports should be increased this year, stocks of lard at the end of 1941 will be relatively large.

The general level of prices of all fats and oils is slightly higher than at this time last year, but is considerably below the 1924-29 average. Oils selling substantially higher this February than last included cod-liver, olive, and sardine; corn oil and butter were moderately higher; edible beef fats, soybean oil, cottonseed oil, linseed oil, oiticica oil, perilla oil, inedible

tallow and greases, palm oil, peanut oil, and castor oil were 5 to 25 percent lower.

FRUITS: New Season

Strawberries move into the center of the fruit situation this month, as big shipments roll to market from Texas and Louisiana, to be followed by supplies from Alabama, Georgia, the Carolinas, and other Southern States. Market supplies were light during March, but a different situation prevails now, and the fruit stands in all the big consuming markets are displaying plenty of fresh berries. Consumer demand is better this year than last, and the crop is expected to yield producers a larger cash income. (Cash farm income from strawberries totaled close to 41 million dollars last year, slightly less than 39 million in 1939, more than 37 million in 1938, and more than 42 million in 1937.)

Apples have been selling higher this season than last, pears have brought slightly higher prices on the New York auctions, and California citrus (not Florida) has been selling higher. Oranges are a high record crop this year, estimated in March at 82.3 million boxes, as compared with 75.6 million last year. An unusually large portion of the early and midseason crop in Florida was used by processing plants. The grapefruit crop was estimated in March at 40 million boxes, as compared with 35 million last year. The largest crop on record was 46.4 million boxes in 1938-39.

POULTRY: Increase

Five to 10 percent more chickens will probably be raised on farms this year, a further expansion of the commercial broiler industry is in prospect, and production of turkeys may be about the same this year as last. Chickens are higher priced this spring than last, since supplies of poultry are smaller and consumer demand is

larger. Helping the poultry price situation also is the smaller supply of pork this season than last.

Hatchery chick production in February was 67 percent larger than a year earlier, the number of eggs set was 24 percent larger, and the number of chicks booked on March 1 for later delivery was 27 percent larger. All sections of the country reported increases in the number of eggs set and chicks hatched, several factors contributing to the increase: A favorable hatching season, abundant supplies of eggs, an upward movement in the 3-year cycle of production, and a heavy demand for broiler chicks.

EGGS: Production

Production of eggs has been setting new high records even though there are fewer layers on farms as compared with a year ago. But consumer demand is stronger, and prices of eggs in 1941 are expected to average higher than in 1940. Average of prices in March and early April was higher than at the same time last year. Annual peak of production is in April, followed by a slight decrease in May, and then by a downward slope through November. Consumer demand should be good during this entire period. The feed-egg price ratio improved in early March, and the ratio is expected to average more favorable than a year earlier during the important egg-producing months this spring and summer.

(A study by BAE shows that the trend in the cost of producing eggs has been definitely downward for 20 years. Lower feed costs per dozen eggs have been a large factor in this situation; another is that efficiency in production methods has been raised. Hens nowadays produce more eggs. This was abundantly revealed last winter when total production of eggs exceeded that of a year earlier despite fewer layers on farms.)

FRANK GEORGE.

SHARING IN THE DEFENSE PROGRAM

THE national defense program brings to individuals both sacrifices and benefits. Despite all efforts to equalize the sacrifices, some will contribute more than others. Likewise, conditions cannot be so arranged that everyone will share equally in the increase in national purchasing power which is expected to result from the war stimulated industrial expansion. Already, difficult problems have arisen in connection with the desires of various groups to protect their interests under the defense program.

THE rapid rise of business activity under the stimulation afforded by war-time exports and the national defense program has brought greater employment, wages, and industrial profits. People in general have more money to spend for commodities and services, including farm products. When consumer purchasing power increases, prices and incomes received by farmers also advance. Such a tendency is noted as the defense program progresses.

But many sincere persons think that food prices should not be permitted to experience further substantial increases, because this would contribute to an "inflationary price spiral" and be unfair to industry and labor. Industrial price advances are being held down or prevented as far as practicable, and the wages of many people have not risen. Would it be unfair, then, to allow farm prices to rise without controls similar to those exercised in connection with industrial prices? The answer depends partly upon a consideration of the way in which industrial profits, the returns to labor, and farm prices and income react to shifting business conditions.

WHEN as a result of business depression the demand for goods slackens, many producers of industrial products attempt to prevent a drastic decline in prices by reducing production. Labor, also, more or less successfully attempts to retain rates of pay prevailing before the decline in demand, permitting the depression to

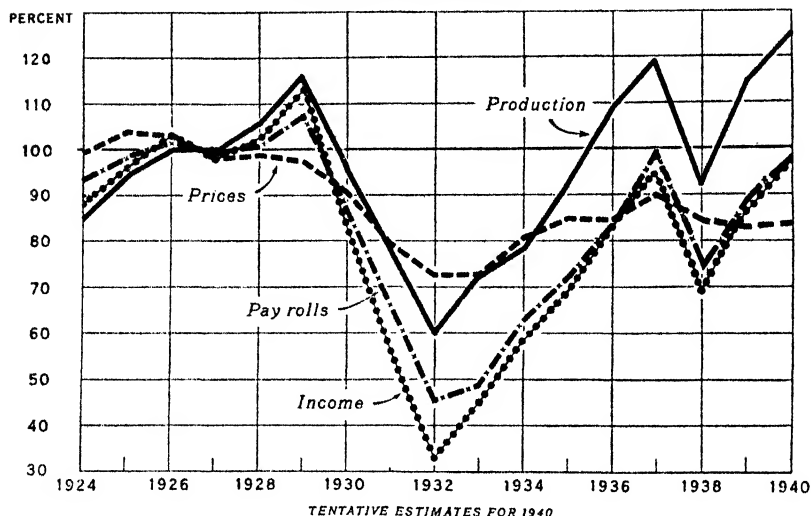
take effect in reduced employment rather than lower wage rates. This combination of industrial and labor policies results in throwing onto the general public the burden of upkeep of a considerable proportion of the formerly employed workers.

Farmers, fortunately for the general public, do not find it profitable to react to a depression in the same way as industry and labor. When an industrial concern reduces output it also substantially reduces its expenses of production. The expenses of agricultural production, on the other hand, are largely fixed regardless of the quantities produced. Mainly for this reason, farmers continue to produce about as much during a business depression as they did before the latter set in, and the full effects of the decline in demand for their products are reflected in lower prices.

When business recovers and the demand for products increases, business concerns respond by increasing output, selling more goods at the same or slightly higher prices. This brings larger industrial profits, and increases employment and industrial pay rolls. Farmers, who have not previously reduced their output to any extent, can gain only through an increase in prices received for the products which they have continued to produce in ample volume throughout the depression. This increase in prices raises farm income.

These tendencies on the part of industry, labor, and agriculture are shown in the accompanying charts.

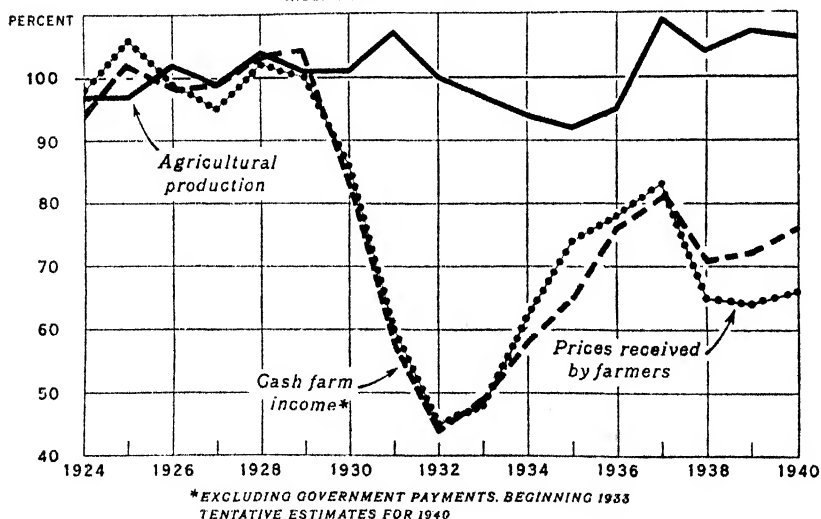
**MANUFACTURES: INDUSTRIAL PRODUCTION, WHOLESALE PRICES
OF FINISHED PRODUCTS, INCOME, AND FACTORY
PAY ROLLS, UNITED STATES, 1924-40**
INDEX NUMBERS (1924-29=100)



It will be observed that in the depression years, despite the attempt of industry to hold up prices and decrease expenses by reducing output, the net income of industrial corporations declined as much as or more than cash farm income. And despite resistance on the part of labor to wage rate decreases, total factory pay rolls also

declined severely. Taken as groups, the owners of industrial enterprises, labor, and farmers are all affected adversely, and in a surprisingly similar degree, by a severe business depression. Likewise, the percentage gains from business recovery, although not exactly the same for these groups, are surprisingly similar. Each of these

**AGRICULTURAL PRODUCTION, AND PRICES AND CASH INCOME
RECEIVED BY FARMERS, UNITED STATES, 1924-40**
INDEX NUMBERS (1924-29=100)



groups, swimming in the same waters but using different strokes, is affected very much the same by the alternating waves of prosperity and depression. In the recovery since 1932, however, agriculture has not gained as much as industry and labor partly because of the loss of export outlets.

WE are now in an advancing phase of the domestic business economy, with the unusually sharp rise in 1940 due in considerable measure to the expansion of Government expenditures for defense and exports of armaments to Great Britain. From August 1939, the month before the war began, to November 1940 (the last month for which data on all of the following items are available) factory pay rolls and cash income from farm marketings experienced very similar percentage gains. Profits of industrial corporations rose by an even greater proportion. As would be expected, these gains have come about largely through a substantial increase in the output of industrial products with relatively small changes in prices of such commodities, a marked increase in factory employment with relatively stable hourly wage rates, and a moderate rise in prices of farm products with only a small change in marketings. This is shown in the following table.

**Index Numbers, Seasonally Corrected,
November 1940**
[August 1939=100]

Item	November 1940
Profits of industrial corporations.....	181.7
Factory production.....	126.2
Wholesale prices of nonagricultural products.....	105.0
Factory pay rolls.....	128.4
Factory employment.....	115.4
Factory hourly wage rates.....	106.9
Cash income from farm marketings.....	119.5
Volume of agricultural production.....	103.0
Wholesale prices of farm products.....	111.8

Naturally, people hope that the defense effort will not make necessary any curtailment in standards of living or lead to extreme price inflation simi-

lar to that which occurred in some past war periods. In dealing with these and other defense problems, we should remember the contrasting manner in which industry, labor, and agriculture respond to and participate in changes in the total volume of productive activity and national income. There is good reason for not placing farm products in the same category as industrial products with respect to all phases of price regulation. To prevent farmers from receiving any price increases arising out of the greater business activity and consumer purchasing power would, in effect, be the same as preventing industry from selling more goods, or labor from benefiting from a fuller measure of employment.

INEVITABLY taxes and costs of production incurred by industrial firms will rise to some extent during the period of defense activity. Large increases in costs, such as considerably higher wage rates, probably would necessitate price increases. But, as partially indicated by the foregoing table, the increase in production of industrial products and consequent reduction in overhead expense per unit of output makes it possible for producers of industrial commodities to absorb some increases in costs without any widespread or marked increase in prices.

Labor gains from the increased industrial activity in several ways: Through increased employment, more hours worked per week at the prevailing hourly wage rates, and in some cases higher wage rates. It is true that some wage earners who have been fully employed and who do not participate in wage increases do not benefit in any of these ways. It is well to keep in mind, however, that from 1929 to 1940 factory wage rates per hour increased 18 percent, while the cost of living declined 18 percent and the cost of food included in the family budget declined 27 percent.

Evidently, therefore, a considerable rise in living and food costs would have to occur before wages now received would be out

of line with the buying power of factory wages in what have been considered the prosperous years just before the great depression. Many workers who have continued to be employed since 1929 have benefited by a large reduction in food costs which was not accompanied by a corresponding decrease in earning power. They should now have no objections to farmers' sharing in any general prosperity accompanying the defense program.

Also, increases in prices of farm products may not have the same price inflationary effects as might increases in prices of industrial products or wage rates under present conditions. If the prices of industrial products are increased and the resulting higher costs of living bring about a rise in wage rates, costs of producing the industrial products are again increased. This may lead to a further rise of industrial product prices and a continuation of the upward spiral of higher living costs, wages, and prices. If, on the other hand, higher prices for farm products should result in successful demands for higher industrial wage rates, the latter may not affect the costs of producing agricultural products or the output of such products sufficiently to bring a further rise in food prices. In other words, in the chain of events sometimes referred to as the "vicious inflationary spiral" rises in prices of agricultural products do not con-

tribute in the same manner or have the same effects as rises in prices of industrial products or wage rates.

IN general, therefore, an equitable distribution of the benefits of "prosperity" brought on by the defense program would mean:

(1) Larger output of industrial products in response to increased demand, with lower per unit costs and larger total profits for industrial concerns resulting therefrom;

(2) A large increase in employment of labor, with perhaps some moderate increases in wage rates which have been out of line with others, resulting in a larger total volume of purchasing power for labor;

(3) Substantial recovery in prices of farm products from the levels prevailing in preceding years when demand conditions made necessary the sale of an undiminished volume of farm products at prices out of line with those obtained by industry and labor. This would give agriculture increased purchasing power which, except for some individual farm products, it could not obtain by increasing the already large volume of output.

F. L. THOMSEN.

Freezer Locker System Expands

A SIGNIFICANT development in food processing and distribution in recent years has been the rapid growth of the frozen food locker system. More than 1,000,000 such lockers are now available in something over 3,200 plants, it is estimated. Although individual frozen food lockers for preserving perishable foods at low temperatures were used in Nebraska some 25 years ago and in the Pacific Northwest as early as 1920, this enterprise has made its most rapid growth during the past 5 years.

In a Nation-wide survey made by the Cooperative Research and Service Division of the Farm Credit Administration with the cooperation of colleges of agriculture, the National Frozen Food Locker Association, and State locker associations, 1,200 of the estimated 2,500 locker plants operating on January 1, 1940, provided satisfactory information on their operations. Of these plants, 85 percent had been opened since 1935 and 60 percent during 1938 and 1939. On this basis, it is estimated that plants

were being opened at the rate of about 750 per year or 62 per month during the latter 2 years. The reporting plants had an average capacity for 330 lockers each, of which an average of 211 were rented. Average capacity of plants operated by farmers' co-operatives was 359.

INDIVIDUALS owned about one-half of the 1,200 locker plants reporting; commercial corporations, 22 percent; partnership, 16 percent; and cooperatives, 14 percent. The percentage of plants opened by commercial corporations declined during the 1935 to 1939 period whereas other types of ownership increased in importance.

Of all plants reporting on January 1, 1940, 23 percent were operated with creamery, poultry, and milk plants; 18 percent with ice and ice cream plants; 25 percent with groceries and meat markets; while units operated separately made up 21 percent of the total. The latter two types increased as a percentage of the total during the period 1935 through 1939, whereas the first two declined. The separate units reporting were largest, with a capacity for 431 lockers, while those operated by retail meat markets and grocery stores were smallest, with an average capacity for 231 lockers.

Approximately two-thirds of the 2,500 plants operating on January 1, 1940, were in the 12 North Central States. Leading States in the number of plants were: Iowa, 453; Washington, 313; Minnesota, 263; Wisconsin, 217; Nebraska, 160; Illinois, 152; Oregon, 98; and Texas, 81. Considerable expansion is taking place in the South Central and Western States. In the South, expansion is most rapid in Texas, Tennessee, Mississippi, and Alabama.

THE rapid expansion of this industry during the last decade may be traced to a number of factors: (1) the improvement in automatic temperature controls and greater use of electricity; (2) the advance in freezing technique

and more widespread understanding of sharp freezing and low temperature storage as a method of food preservation; (3) the greater variety and palatability of properly frozen foods as compared to the home-canned food supply; and (4) the savings resulting when home or locally grown animals are processed rather than bought at retail. With usual locker-plant charges and locker use, the savings have been estimated to be 9 cents per pound on beef and 5 cents on pork.

That farmers are benefiting from this development in the food industry is indicated by the fact that three-fourths of the patrons in the plants reporting were farmers and that 70 percent of the plants in the North Central and Western States were in towns of less than 5,000 population. Although the development thus far has been largely in more or less rural communities, an increasing number of plants are operating in larger urban centers. Their function is chiefly that of processing and storing meats, fruits, vegetables, fish, and sea foods purchased at wholesale.

Rates charged for lockers and related services vary from one community to another as well as from area to area. Annual locker rental rates range from \$7 to \$15 per locker. The usual rates are \$10 and \$12. The size of the regular locker is between 5½ and 6 cubic feet. In the Pacific Northwest, many lockers are larger. Charges for chilling, cutting, grinding, wrapping, and freezing meat range from 65 cents to \$2 per hundred pounds although most often they are \$1.25 to \$1.50; freezing and handling fruits and vegetables, 1 to 3 cents per quart; curing and smoking, 3 to 5 cents per pound; lard rendering, 1½ to 3 cents per pound; and slaughtering, \$1 to \$2 for the average hog and \$1.50 to \$2.50 for the average beef. It seems reasonable to assume that eventually there will be less variation in these charges and that they will be adjusted to costs plus a reasonable rate of return on the investment.

ASSUMING that three-fourths of all lockers used are rented by farmers, it may be concluded that approximately one-half million, or 8 percent of the total number of farm families in the United States, were using this service at the beginning of 1941. Whether this percentage will be increased to 20 or 50 percent during the next 10 years will depend upon the rates as well as the quality and type of service rendered. These will depend, in turn, upon the cost of furnishing locker services and the type of plant which is set up to render the services.

Studies of locker plant operation indicate that two all-important factors control the cost of furnishing modern locker service to farmers. The first is volume or size of the business. Other things being equal, the larger the plant the lower the investment per locker of capacity. Whereas small complete processing units of 200 lockers each with modern equipment might cost \$40 per locker, a unit of 500-locker capacity with comparable equipment might call for an invest-

ment of only \$30 per locker. Further, the unit servicing 500 lockers may have adequate volume to utilize some specialization in labor. This should mean better service as well as lower costs. The larger processing unit would be in a better position to provide modern facilities for rendering supplementary services such as slaughtering, curing, smoking, and lard rendering.

A second important factor controlling cost is the utilization of plant capacity. This results from the relatively large proportion of fixed costs. A 500-locker plant may have interest, depreciation, taxes, insurance, water, and power costs amounting to \$3,500 even though only 50 percent of its lockers are rented. This would be \$14 per locker rented. If all lockers were rented, however, this cost would be approximately \$7 per locker rented. It is very important, therefore, that the plant be built to fit the effective demand of the community.

S. T. WARRINGTON,
Farm Credit Administration.

Farm Manure: Valuable Product

IT would cost farmers more than \$1,500,000,000 a year to buy in commercial fertilizers the plant food contained in manure produced on their farms. The value of these manures is greater than that of corn, our most valuable farm crop. The gross value of milk produced is the only farm product that exceeds manure in value. And yet, about 20 percent of the manure is practically wasted and still greater quantities of the plant foods lost, largely by leaching, before the manure is applied to the land.

The soils of the country receive each year about 1 billion tons of farm manures and 8 million tons of commercial fertilizer. The fertilizer costs farmers about \$200,000,000. More

efficient handling of farm manure will be to the advantage of farmers, especially in the years just ahead. Demand of the munition industry for nitrogen materials is likely to increase materially in conjunction with the defense program and, with smaller supplies available for fertilizer use, somewhat higher prices for nitrogen fertilizers may develop.

As a result of the war, ocean shipping rates have increased sharply; and, industrial wage rates are rising. Consequently fertilizer manufacturers face increasing costs. Under these conditions, farmers may have to pay more for their fertilizer. Saving of plant food in manures by efficient handling pays in normal times, but,

**Average Quantity Farm Manure Applied Per Acre to Specified Crops Harvested
in 1938 and Use of Manure Spreaders, by States, 1939**

Geographic divisions	Corn	Wheat	Oats	Cotton	Potatoes	Sugar- beets	Manure spread with spreader
	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Tons</i>	<i>Percent</i>
New England	9.4	(¹)	1.6	-----	2.9	-----	58
Middle Atlantic	5.1	1.4	.7	-----	4.3	-----	56
East North Central	2.5	.9	.4	-----	5.9	2.5	74
West North Central	1.5	.2	.2	-----	2.8	1.7	72
South Atlantic .....	.6	.6	² 4	0.3	2.1	-----	19
East South Central .....	.3	.3	(¹)	.3	2.2	-----	11
West South Central .....	.2	.1	(¹)	.1	2.4	-----	8
Mountain .....	.5	.2	.6	(¹)	3.4	7.3	51
Pacific	3.9	.1	.7	(¹)	1.3	1.0	46
Average for States reporting	1.4	.3	.3	.2	3.6	4.0	58

¹ No information was obtained relative to manure use on specified crop.

² Includes only Delaware, Maryland, Virginia, and West Virginia.

with higher fertilizer prices, the savings will be even more pronounced.

IN the United States, there are wide variations in the extent of manure use, according to reports from more than 25,000 crop correspondents. These reports show that per-acre applications of manure to cropland are heavy in the northeastern and North Central States. In these sections, livestock numbers are large relative to acreage of cropland, the pasture season is relatively short, and most livestock are housed during the winter season.

Little manure is applied to cropland in the South, or to nonirrigated cropland in the Great Plains and Mountain States. In the South, livestock numbers are small in relation to cropland, and the pasture season is relatively long. On dry land farms in the Great Plains and Mountain States, livestock numbers in relation to cropland are small. Also, in these dry land areas, applications of manure tend to give relatively small increases in crop yields owing to the deficiency of soil moisture, and many farmers apparently do not think it worth while to apply the accumulations of farm manure to their cropland.

ABOUT 75 percent of the total manure applied to crop and pasture land is used on land in the 6 crops included in this study. These crops—

corn, wheat, oats, cotton, potatoes, and sugar beets—occupied about two-thirds of the acreage of land used in crop production in 1938.

Corn is the heaviest user, and probably around 50 percent of the total manure hauled out from barns and feed lots is put on land to be planted to corn. Applications of manure on corn land are heaviest in New England. They are also relatively high in the Middle Atlantic and East North Central States. Little manure is applied to corn land in the Great Plains, the Mountain, or Southern States.

The per-acre applications of manure on wheat and oats for the country as a whole averaged only about 20 percent as much as for corn. Wheat acreage is relatively concentrated in the dry land areas of the Great Plains and Mountain States. However, even in the North Central and Northeastern States, less manure is applied to small grain than to corn. Heavy applications of manure to wheat and oats tend to cause excessive plant growth that results in increased losses from lodging and from disease. On the other hand, corn is a vigorous feeder and yield increases are marked with heavy applications of manure. Consequently, farmers generally prefer to apply manure to this crop rather than to small grains. All the plant food from manure is not used up following its application in the first year. Thus, small grain which often follows corn

in rotation benefits from the manure applications to the corn.

COTTON land gets very little farm manure. Livestock numbers are small in relation to cropland in most cotton areas. This together with the long pasture season accounts for the small manure application on cotton. Manure applications are small in all cotton areas but are larger in the States east of the Mississippi River than in the States west. Cotton receives relatively heavy applications of commercial fertilizers, about two and one-half times as much as the cropland average for the country as a whole. Most of this is applied to cotton in the Eastern States.

Per-acre applications of manure to potatoes and sugar beets are much heavier than for other crops in the study. In the Middle Atlantic, the New England, and the Pacific Coast States per-acre applications averaged less for potatoes than for corn. For all other groups of States, manure applications are much heavier for potatoes than for corn. For the country as a whole, acre applications

of manure averaged about 50 percent more for potatoes than for corn, with the heaviest applications in the East North Central States. Manure applications for sugar beets were especially heavy in the Mountain States, but in other States, manure applications for sugar beets averaged less than for potatoes.

METHODS of handling manure vary largely with the quantity applied. When small quantities are to be applied, hand methods for spreading the manure are commonly used. Machine spreaders are used most in the North Central States and least in the South Central States. In the New England and Middle Atlantic States, about the same proportion of manure is hauled with spreaders as is so hauled for the country as a whole. The use of the spreader in the Mountain and Pacific Coast States is somewhat below the average for the entire country. For the country as a whole almost 60 percent of the manure hauled was applied to crop and pasture land with spreaders.

A. P. BRODELL and R. C. TETRO.

Changes in the Farm Population

THE farm population on April 1, 1940, was 30,475,000, or virtually the same as in 1930, according to the Bureau of the Census. But there were large decreases in some regions and States, and considerable increases in others.

Drought, mechanization, and a trend toward larger farms with a smaller resident labor force are clearly reflected in some sections, and high birth rates and a damming up of rural youth in others. In the industrial areas there appears to have been an increase in small and part-time farming units. New frontiers also have been developed in widely scattered parts of the country—on cut-over lands, swamp lands, and dry lands.

Moreover, in many parts of the country there was a net movement from farms to towns and cities, as there had been during most of the preceding 20 years.

LARGEST decreases were reported in the Great Plains States. South Dakota led with a loss of 21 percent, and North Dakota, Montana, Nebraska, Colorado, and Kansas showed losses of more than 10 percent. Except for New Mexico, all of the States included in the Great Plains reported fewer people living on farms in 1940 than in 1930. These figures reflect the history of agriculture in that region during the last 10 years—protracted droughts and crop failures, the

changing over to larger farming units and to grazing, as well as the reaction from the rapid expansion which took place as an aftermath of World War I. But the influence of drought is unmistakable; in each of these States the counties in which drought distress was most marked reported the greatest losses in population.

Less rapid decreases in farm population were reported in Utah and Nevada; Iowa and Illinois in the Corn Belt; in Arkansas, Georgia, South Carolina, and Virginia among the Southern States; in Delaware, New York, Vermont, and Rhode Island. Vermont is the only one of this group of States which also reported a decline in total population.

LARGE increases in farm population were reported in five areas, but the reasons for these increases do not appear to be the same in all of these areas. In New England and most of the northern and eastern industrial States there appears to have been an increase in suburban and part-time farming units. (Some of this increase in New England may represent a more complete enumeration of small and part-time farming units in 1940 than in 1930.) In the Pacific Northwest and in California, the inflow of settlers from the Great Plains and other States was probably the major factor. In the Southwestern States, New Mexico, and Arizona, a combination of high birth rates and of in-migration was probably responsible. Florida expanded its agriculture and its farm population. West Virginia, with a rate of increase which was exceeded only by that for Connecticut, appears to reflect the results of high birth rates and a growth of subsistence and part-time farming, especially by people who were already living in the country and who turned to farming when outside employment was difficult to find.

ALTHOUGH the number of persons living on farms was reported as about the same in 1930 and 1940, the Census reported a decrease of 3 percent

in number of farms. This decrease in number of farms can be accounted for by the decrease in number of sharecroppers in the Southern States. If sharecroppers in both periods had not been classified as farm operators, the Census would have reported a small increase instead of a decrease in total number of farms. The number of sharecroppers was reported as only 541,291, a decrease of nearly one-third, or about 235,000, whereas the number of other tenants decreased by only 68,000. The 3 Southern Divisions contributed unequally to the decreases in the number of sharecroppers: the South Atlantic States reported a decrease of 68,000, of which Georgia alone contributed 40,000; the East South Central reported a decrease of 49,000; but the West South Central States, Arkansas, Louisiana, Oklahoma, and Texas, reported a reduction of nearly one-half in the number of sharecroppers—a loss of 118,000 sharecroppers. In these four States there was also a decline in the number of “other tenants.”

THE effects of these and other developments upon the number of people living on farms will be more clearly revealed when more detailed data become available. But a comparison of the changes in number of farms and the number of persons living on farms in each State provides some additional information on the developments which probably took place.

There are 30 States in which the average number of persons per farm increased. In 11 of them the number of farms declined more rapidly than the farm population; in 9, the number of farms declined while the farm population increased; and in 10, the farm population increased more rapidly than the number of farms. In all of these States there probably was a decrease of farm population in the more commercial farming areas, and an increase in number of farms and in farm population in the less commercial farming areas. In Kentucky, for example, the largest increases in

total population occurred in the mountain counties, but there were some decreases in the Blue Grass areas. With the exception of Virginia, each of the 13 Southern States is included in this group. All reported fewer sharecroppers; a development which might reduce the number of farms more than the number of persons living on farms, provided some of the former sharecroppers remained on the land as wage hands.

In another group, which includes 8 States, the Census shows that both farm population and the number of farms declined, but population declined more rapidly. With the exception of Utah, Iowa, and Illinois, these are Great Plains States. Here there apparently was an increase in the size of farming units with a consequent reduction of farm population. In addition, there probably was a heavy out-migration of young people, with the result that the families which remained were smaller than before. There may also have been an increase in the extent to which persons operate farms without living on them, and are therefore not counted as part of the farm population.

IN eight States, both farm population and number of farms are reported to have increased, but the number of farms grew more rapidly. In Massachusetts, Connecticut, and New Jersey this was probably due to an increase in small suburban farms; in the cut-over areas of Wisconsin and Minnesota the movement of small families to the cut-over areas may be a major factor; in the State of Washington there probably was a combination—an increase of suburban farms and a movement to cut-over lands. In Arizona and West Virginia, where birth rates are high, there apparently was a development of small farms on which the average size of family was about the same or smaller than for the State average.

Finally, there are two States, Nevada and Virginia, in which the

farm population decreased while the number of farms increased.

In general, the figures which are available to date indicate a considerable reduction in the farm population in the predominantly commercial agricultural areas and an increase in those areas in which commercial agriculture has not been highly developed, whether because of undeveloped agricultural resources or the lack of such resources. A considerable increase in part-time farming in the vicinity of large cities is suggested by the rapid increase in total population of the areas adjacent to large cities. For example, the cities of 100,000 or over reported an increase of only 4.5 percent, but the remainder of the counties in which they are located increased by 14.2 percent.

ONE major question cannot be answered with present data. The Bureau of Agricultural Economics had estimated an increase of 2,000,000 in the farm population from 1930 to 1940, based in part on the fact that the Census had reported an increase of 1,632,000 between 1930 and 1935. The 1940 Census, showing no net change for the decade, may indicate that net losses during the last half of the decade may have offset the increases during the first half. On the other hand, there may be a large number of persons who live in the open country and carry on sufficient agricultural operations to be counted in the farm population in periods of widespread industrial unemployment, as in 1934, but who contract their agricultural operations when nonfarm employment is more readily available, as in 1929 and 1939. These people could shift into or out of the farm population without changing residence. Another possibility lies in the difficulty of enumerating small scale agricultural operations with the result that in some areas the figures for 1930 and 1940 may not be directly comparable. As more detailed data become available, the influence of

these and other factors upon the comparisons will be more clearly revealed.

ONE important point becomes increasingly clear from the figures which have already been released. It is that the farm population as reported by the Census does not include all persons who get the major share of their living from the farm. The Census classification includes only those persons living on farms. But part of the decrease in farm population in the major crop growing areas is due to the fact that many farm laborers are no longer living on the farms. The Census shows a reduction in the number of white and Negro sharecroppers. Where sharecroppers have become wage hands, many have left the farms. On the other hand, there

are some areas in which an appreciable percentage of the operators are not living on the farms they operate: "suitcase" farmers, "town" farmers, and the like. Since the farm population, as defined by the Census, includes only those persons who actually live on farms, these other persons and their dependents are not included. While it is true that some of the people who live on farms do not make their living from farming, it is likely that this number is less than that of the people who make their living from farming without living on farms, including those who work on farms only seasonally. It may be, therefore, that in some States, the number of people making their living on farms is higher than the number reported as the farm population.

CONRAD TAEUBER.

MARGARINE

When the price of butter goes up the demand for margarine increases. This happened last year. Both production and consumption of margarine were moderately larger in 1940 than in 1939, and prices were slightly higher. Consumption totaled 319 million pounds, but this was about 19 percent less than the high record consumption of 397 million pounds in 1937.

* * *

Cottonseed oil made up 45 percent of the total fats used in the manufacture of margarine last year, as contrasted with only 10 percent of the total a decade ago. Soybean oil accounted for an additional 34 percent of the total last year, as contrasted with less than 1 percent a decade ago. Ten years ago the bulk of the fats used in the production of margarine consisted of foreign oils; last year the foreign oils accounted for only 11 percent of the total.

Margarine is manufactured in comparatively few States. About 58 percent of the total output in the fiscal year 1939-40 was in Illinois, Ohio, and Indiana. California, Kansas, and New Jersey followed with 26 percent of the total. Most of the remainder was produced in Michigan, Texas, Maryland, and Missouri . . . Consumption varies widely. The total number of licensed dealers decreased in most States in 1939-40, although significant increases occurred in Connecticut, Alabama, Mississippi, Arkansas, Louisiana, and Washington.

* * *

Margarine has been used as a cooking as well as a table fat in recent years. According to the Census of Manufactures, 31 million pounds—or more than 10 percent of total consumption—was used in the bakery industry in 1939. Large quantities are used for cooking in restaurants and households. Manufacturers recently have been trying to improve margarine for frying purposes.

Farm Products: Producer to Consumer

A SCORE OF YEARS ago the farm magazines and farmer organizations were asking: *What Happens in the Dark?* Rough comparisons were made of the prices received by farmers and the prices paid by consumers, and the accusation was made that the machinery of distribution was taking too large a slice of the consumer's food dollar. Some public investigations were made of the processes of marketing and distribution. These ended with the more or less general conclusion that the marketing and distribution of farm products had become pretty complex, that there were a multiplicity of services and charges, but that no individuals in the long chain of distribution seemed to be taking an inordinate profit.

Today, considerably more is known about the processes and costs of marketing and distribution, even though these processes have become increasingly complex. Some of the many changes which have taken place in the processing and distribution of food products have tended to increase marketing costs, others have tended to decrease the costs. In general, consumers are getting much more in the way of goods and services from the marketing system now than a quarter century ago—they are buying baked bread rather than flour, canned instead of raw fruits, small-packaged rather than bulk food. All this adds to the cost of marketing, and partly explains the increased spread between farm and retail prices.

THE accompanying chart shows how farm and retail prices have fluctuated during the last 28 years. It shows that whereas farmers received a half or more of the consumer's food dollar during the early years of this period, the farmer now gets considerably less than half of this dollar. In some years the farmer has received little more than a third, and in most o

For a number of years the Bureau of Agricultural Economics has been studying the marketing of farm products. Methods and costs of marketing, processing, and distribution have been studied at first hand, and analyzed in terms of the public welfare. Studies have covered most of the processes through which farm products pass—from production and assembly at country points, through transport, processing and storage, to wholesale and retail distribution. The machinery of processing and distribution is very different than it was a quarter century ago.

We have asked the Bureau's marketing specialists to bring together in a group of short articles the high lights of this marketing research, to tell what they have learned, and to indicate as nearly as may be the major problems pressing for solution in a marketing system which should yield maximum benefits to all the agencies concerned—from producer to consumer. The subject seems particularly timely now that public attention is being redirected to the costs and processes of marketing. The accompanying article is the first in this series.—Ed.

the years since World War I his share has never been as much as it was in those days of *What Happens in the Dark?*

The charges made for all marketing services are equal to the margins or spreads between the prices paid by consumers at retail and the prices received by farmers for equivalent quantities of farm products. A striking characteristic of charges for marketing services is their stability in relation to the wide variation in retail value and farm value. The existing organization of agricultural production and marketing puts the

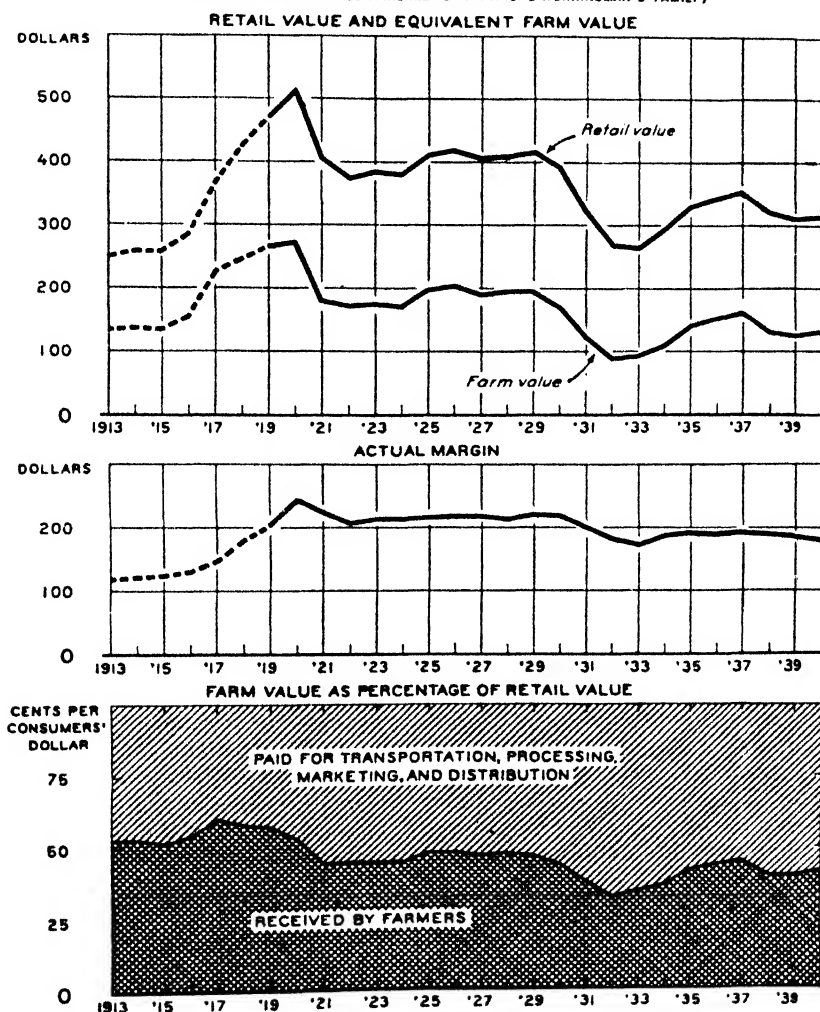
middleman in a relatively favorable position. Middlemen singly or as a group appear to be more successful in their efforts to maintain charges and revenue than are farmers in attempts to sustain farm prices and incomes.

IT is possible to make only rough approximations of the total marketing bill and its division into charges for the services performed under particular marketing functions. In 1940 consumers spent about 14.8 billion dollars for food products pro-

duced by American farmers. Total payments to farmers for producing these foods amounted to 6.2 billion dollars. The national marketing bill was 8.6 billion dollars. Of this total about 3.6 billion dollars was the charge for retailing services, 1.2 billion the charge for wholesale distribution, 0.8 billion for transportation, and 3.0 billion for processing and local assembly.

The importance of marketing in contributing to the final value of consumers' goods can perhaps be best illustrated by a division of the dollar

RETAIL AND FARM VALUE OF 58 FOODS, 1913-40
(BASED ON AMOUNT CONSUMED ANNUALLY BY A TYPICAL WORKINGMAN'S FAMILY)



spent by the consumer at retail into the share going to pay primary producers for their products and the share going to pay middlemen for marketing services. This division reflects the value appraisal in the market of the contributions of each. In 1940 the average dollar spent by the consumer for foods grown on American farms was broken up into 58 cents paid to marketing agencies and 42 cents paid to farmers. In terms of normal levels, consumer expenditures for cotton products are divided into about 10 percent paid to cotton growers for lint cotton and 90 percent paid to middlemen. For tobacco the farmer's share is roughly the same—about 10 percent—with 90 percent going to pay processing, transportation, storage, taxes, and distribution.

DURING the last several decades, the portion of consumers' expenditures going to farmers for their products has decreased while the portion taken by middlemen in payment for marketing services has increased. It is inaccurate, however, to conclude that the persistent shrink in the share of the consumer's dollar going to the farmer necessarily demonstrates that the situation of the farmer is getting progressively worse. The downward trend in the farmer's share is largely a result of modern progress towards increasing specialization which has introduced new processes and added services into the marketing system while the farmer has shifted from diversified to specialized farming in areas far removed from consumption centers.

The farmer ordinarily cannot expect to improve his position by taking over and performing the functions of middlemen and thus carry his product directly to the consumer. Certain of the marketing operations, particularly processing and transportation, require specialized and expensive equipment which is beyond the reach of the individual farmer. The shifting of time and resources from farm production to marketing would require

sharp curtailment in the scale of agricultural production and would restrict farming to areas adjacent to consuming centers. Many farmers, however, have combined into group cooperatives owning and managing agencies which successfully perform specific marketing functions.

The normal trend of industrial and agricultural development is in the opposite direction towards increased specialization in farm production and marketing with consequent increase in the relative importance of marketing and a further reduction in the farmer's share of the consumer's dollar spent for farm products, although net farm income should increase.

THE middleman is performing a difficult and essential task which requires labor, equipment, and materials. His costs of operation are substantial. Numerous investigations have demonstrated that as a rule the net profits of the typical middleman are not excessive. While a few firms may be obtaining large profits, others operate at a loss. On many food products the net profit (including returns to capital) of all marketing agencies combined does not exceed 5 cents of the consumer's dollar. The average net profit on all farm products is probably not more than 10 percent of the retail price.

Direct labor costs are the dominating single expense item in marketing farm products, amounting to nearly half the total operating expenses for most marketing functions, and about a third of the value added in manufacturing. In certain agencies the aggregate of direct nonlabor costs may be more important than the direct labor costs. Payments to labor by marketing agencies add to the stream of consumer incomes and increase the demand for farm products.

Inefficiency in marketing results from the use of excessive amounts of labor and capital resources in performing a specific marketing operation. To the extent that inefficient marketing employs persons who would other-

wise be idle or on relief, it operates to equalize real incomes. Even though this may result in higher costs and increased prices to consumers, additional workers are enabled to buy.

The social gain from increased marketing efficiency attained through reducing the number of man-hours required in marketing operations will depend upon how effectively the displaced labor is utilized elsewhere. However, the selfish interest of the farmer is best served when labor requirements in marketing are reduced, even though that labor is unemployed or paid a much lower rate elsewhere. The farmer also makes a direct gain in prices received through any increases in wages or employment in agencies not concerned with marketing of farm products.

WE must not conclude, merely because such profits as exist in marketing enterprises seem reasonable, that nothing can be done to reduce marketing costs. The costs which exist today in many cases are erected upon a foundation of inefficient organization and outmoded facilities which not only weigh upon consumers and producers but also penalize middlemen themselves. New methods, reorganization of marketing processes, and the providing of adequate modern facilities should improve the position of the middlemen and at the same time benefit both farmers and consumers.

R. O. BEEN.

Processes and problems in the assembly of farm products at country points will be discussed next month.

United States: Exports and Imports of Specified Agricultural Commodities, September-February 1939-40 and 1940-41 and February 1940 and 1941¹

Commodities	Unit	September-February		February	
		1939-40	1940-41	1940	1941
Exports:					
Pork:		Thousands	Thousands	Thousands	Thousands
Cured pork ¹	Pounds	37,305	6,842	6,417	1,236
Other pork ²	do	59,422	11,997	21,265	1,537
Total pork	do	96,727	18,939	27,682	2,773
Lard, including neutral	do	141,529	71,181	25,133	14,830
Wheat, including flour	Bushels	23,430	18,089	3,817	2,484
Apples, fresh ⁴	do	2,455	573	158	52
Pears, fresh	Pounds	62,865	13,705	772	577
Tobacco, leaf	do	176,674	68,638	17,737	13,551
Cotton, excluding linters (500 pounds)	Bales	4,959	705	788	72
Imports:					
Cattle	Number	282	350	30	78
Beef, canned, including corned	Pounds	44,122	26,164	6,445	6,242
Hides and skins ⁵	do	172,010	230,116	32,149	35,183
Barley malt	do	33,479	18,433	3,969	2,893
Sugar, cane (2,000 pounds)	Tons	1,502	1,342	261	336
Flaxseed	Bushels	5,451	5,357	1,763	1,285
Tobacco leaf	Pounds	30,639	32,215	4,830	4,505
Wool, excluding free in bond for use in carpets, etc	do	96,280	211,868	21,086	54,427

¹ Corrected to March 28, 1941.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled or salted and canned pork.

⁴ Includes baskets, boxes, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records, Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Indus- trial pro- duction (1935- 89=100) ¹	Income of indus- trial workers (1924- 29=100) ²	Cost of living 1924- 29=100) ³	(1910-14=100)					Farm wages	Taxes ⁴
				Wholesale prices of all commod- ities ⁵	Prices paid by farmers for commodities used in —					
					Living	Pro- duc- tion	Living and produc- tion-			
1925.....	91	98	101	151	164	147	157	176		
1926.....	96	102	102	146	162	146	155	179	270	
1927.....	95	100	100	139	159	145	153	179	271	
1928.....	99	100	99	141	160	148	155	179	277	
1929.....	110	107	99	139	158	147	153	180	279	
1930.....	91	88	96	126	148	140	145	167	281	
1931.....	75	67	88	107	126	122	124	130	277	
1932.....	58	46	79	95	108	107	107	96	253	
1933.....	69	48	75	96	109	108	109	85	219	
1934.....	75	61	77	109	122	125	123	95	187	
1935.....	87	69	79	117	124	126	125	103	178	
1936.....	103	80	80	118	122	126	124	111	180	
1937.....	113	94	83	126	128	135	130	126	182	
1938.....	88	73	81	115	122	124	122	125	187	
1939.....	108	83	80	113	120	122	121	123	186	
1940.....	122	94	81	115	121	124	123	126	190	
1940—March.....	113	87	81	114	121	125	123			
April.....	111	86	81	115			123	124		
May.....	115	87	81	114			123			
June.....	121	89	81	113	121	125	123			
July.....	121	91	81	113			122	129		
August.....	121	95	81	113			122			
September.....	125	98	81	114	121	123	122			
October.....	129	100	81	115			122	129		
November.....	132	103	81	116			122			
December.....	138	107	81	117	122	125	123			
1941—January.....	139	109	81	118			123	124		
February.....	141	110	81	118			123			
March.....				119			123			

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio of prices received to prices paid
	Grains	Cotton and cotton- seed	Fruits	Truck crops	Meat ani- mals	Dairy prod- ucts	Chick- ens and eggs	
1925.....	157	177	172	153	140	153	163	99
1926.....	181	122	188	143	147	152	159	94
1927.....	128	128	144	121	140	155	144	91
1928.....	130	152	176	159	151	158	153	96
1929.....	120	144	141	149	156	157	162	95
1930.....	100	102	162	140	133	137	129	87
1931.....	63	63	98	117	92	108	100	70
1932.....	44	47	82	102	63	83	82	65
1933.....	62	64	74	105	60	82	75	70
1934.....	98	99	100	103	68	95	89	90
1935.....	108	101	91	125	118	108	117	86
1936.....	108	100	100	111	121	119	115	82
1937.....	126	95	122	123	132	124	111	93
1938.....	74	70	73	101	114	109	108	78
1939.....	72	73	77	105	110	104	94	77
1940.....	85	81	79	114	108	113	96	80
1940—March.....	92	85	73	118	102	114	83	79
April.....	96	85	81	128	104	110	82	80
May.....	92	83	88	117	108	106	84	80
June.....	83	81	104	112	102	104	81	77
July.....	78	80	89	98	110	105	88	78
August.....	76	77	79	107	110	109	90	79
September.....	77	76	73	114	111	111	104	80
October.....	80	78	79	99	112	116	112	81
November.....	83	79	71	98	112	121	120	81
December.....	81	79	75	93	111	128	122	83
1941—January.....	84	80	78	117	130	121	100	85
February.....	81	80	80	156	130	118	90	84
March.....	84	82	83	134	129	118	90	84

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 63.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and in workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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EXPANSION of the Ever-Normal Granary Program into a Food Program designed to assure ample supplies for national defense and export under provisions of the Lease-Lend Act has been announced by the Department of Agriculture. Abundant supplies of feed grains are available for this purpose, and new crops will soon be coming on. * * * Farmers are being urged to feed hogs to heavier weights and to increase breeding for fall litters . . . to increase milk production (for heavier manufacture of concentrated dairy products) through supplemental feeding during the pasture season . . . to expand poultry laying flocks and to feed for maximum egg production . . . to increase the marketings of cattle for slaughter . . . to increase the production of cannery tomatoes. * * * The production season is off to a good start on food and feed crops, prices of farm products average the highest since 1937, farm cash income will be larger this year than last. New cotton and tobacco crops are being planted . . . harvesting of winter wheat will soon be under way. Costs of production will be larger this year than last. Farm wages are the highest in a decade.

Commodity Reviews

DEMAND: Favorable

DEVELOPMENTS during the past month were favorable to a considerable increase in exports of some agricultural products over the small volume of recent months. At the same time, the improvement in conditions affecting the domestic demand for farm products promises to continue after the temporary slight set-back due to labor difficulties.

Exports of farm products apparently were smaller in recent months than at any time since shortly after the Civil War, and even a considerable improvement would still leave the general export demand picture very unfavorable. Nevertheless, Government purchases for export to Great Britain under the Lease-Lend Act will be a definite factor in the market for some commodities. One billion three hundred and fifty million dollars has been appropriated for agricultural and industrial commodities under this legislation, but no definite portion of this fund has been earmarked for agricultural products. The British food needs include canned meats, canned pork and lard, dried and evaporated milk, cheese, eggs, dried beans, dried fruits, citrus fruit and tomato juices and starches. Canada will be able to supply British needs for wheat for a long time to come, and severe curtailment of British textile operations together with shortage of shipping space is not favorable to a material increase in cotton exports.

The purchasing power of factory wages is at record levels, contributing to increased consumer demand for farm products over the corresponding months of 1940. The money incomes of industrial workers recently have increased much more than the cost of living, although recent rises in wholesale prices of some commodities point to the probability of gradually rising

living costs in the remainder of the year. But with increased industrial activity and incomes, consumers will continue to have large purchasing power available for buying farm products.

F. L. THOMSEN.

PRODUCTION: Prospects

The 1941 farm production season got off to a good start under generally favorable planting conditions and the stimulus of better prices this year than last for most of the products dependent primarily on domestic consumer demand. Farm pastures were in better-than-average condition; the western ranges were in best condition since 1931. There was in general an ample carry-over of old feed, and new grass had started well in the early range areas.

Stocks of grain on farms were large in early April. Farm stocks of corn were smaller than at that time a year earlier, but stocks of oats were larger because of the unusually large production in 1940. Including barley and grain sorghums, farm stocks of all feed grain combined were about the same as a year earlier. Wheat stocks on farms were estimated at nearly 196 million bushels, or about 50 percent more than the 10-year average on April 1.

The Crop Reporting Board pointed out that fruit prospects were still quite uncertain, but that conditions were believed to be favorable in most areas. . . . Reports on plantings of early vegetables in the South and on intended plantings of early planted vegetables in the North showed various shifts as between regions and between crops, but no "very significant changes in the aggregate acreage of vegetables to be grown for fresh market."

PRICES: Higher

Index of prices of farm products in April was 110. This was the highest average of prices received by farmers in 4 years. But prices farmers pay for commodities and services used in production average much higher than this figure, and the purchasing power of farm products is 11 percent below the pre-World War base period.

The advance in prices received during April was due largely to higher

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
April	98	123	80
May	98	123	80
June	95	123	77
July	95	122	78
August	96	122	79
September	97	122	80
October	99	122	81
November	99	122	81
December	101	123	82
1941			
January	104	123	85
February	103	123	84
March	103	123	84
April	110	124	89

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average August 1909-July 1914	April average, 1910-14	April 1940	March 1941	April 1941	Parity price April 1941
Cotton, lb. cents.	12.4	12.4	10.0	9.72	10.4	16.0
Corn, bu. do.	64.2	63.4	58.6	57.1	62.0	82.8
Wheat, bu. do.	88.4	89.3	88.9	71.8	76.0	114.0
Hay, ton. dollars.	11.87	12.16	8.29	7.93	8.10	15.31
Potatoes, bu. cents.	69.7	68.8	83.8	53.8	57.6	88.8
Oats, bu. do.	39.9	40.9	38.8	33.7	35.2	51.5
Rice, bu. do.	81.3		63.2	97.1	111.7	104.9
Apples, bu. dollars.	.96	1.18	.90	.97	1.06	1.24
Beef cattle, cwt. do.	5.21	5.50	7.32	8.28	8.60	6.72
Hogs, cwt. do.	7.22	7.59	4.90	7.08	8.01	9.31
Chickens, lb. cents.	11.4	11.8	12.9	14.4	15.7	14.7
Eggs, doz. do.	21.5	16.6	15.0	16.4	19.7	² 21.7
Butterfat, lb. do.	26.3	25.9	27.5	30.7	32.6	² 34.0
Wool, lb. do.	18.3	18.0	26.1	33.4	34.7	23.6
Veal calves, cwt. dollars.	6.75	6.76	8.63	9.74	9.84	8.71
Lambs, cwt. do.	5.87	6.46	8.14	8.92	9.09	7.57
Horses, each. do.	136.60	140.40	76.60	69.60	69.80	176.20

¹ Post-war base.

² Adjusted for seasonality.

prices of livestock, dairy products, poultry, and eggs. Stimulating factors included the Government commitment to support prices of hogs, dairy products, and poultry products at levels remunerative to producers during the next 2 years under the expansion program designed to increase the production of specified foods for national defense and export under provisions of the Lease-Lend Act.

FARM WAGES: Up

Farmers this spring have been paying highest wages in 10 years. Reason is that the demand for labor is greater than the supply, as increasing numbers of workers have been drawn into industrial plants and military training. As a national average, the supply of farm labor was 82 percent of the demand on April 1 as contrasted with 109 percent a year earlier. This was the smallest supply-demand ratio in 21 years of Government record.

Ratio of farm labor supply to demand was below 75 percent in a large part of the northeastern industrial area and in southeastern areas of accelerated industrial production for national defense. AMS reported that in only a few scattered sections west of the

Mississippi the supply of farm labor was equal to or greater than the demand.

During June and July in recent years approximately 3 million hired hands have been employed to supplement the work of farm families. Reports as of April 1 this year showed more than 2 million hired workers on farms. An additional hired labor force of approximately 1 million workers will be required during the next 2 months.

INCOME: Increase

Cash farm income during the second quarter of 1941 should be substantially larger than in the like period of 1940. Consumer buying power is considerably higher this year than last, and the Government has made commitments to support prices of hogs, dairy products, poultry, and eggs, in conjunction with increased production of these commodities.

Income from marketings of livestock and livestock products was larger in the first quarter of this year compared with last—1,221 million dollars as compared with 1,039 million. Largest gains were in income from meat animals. From marketings of crops the total was 613 million dollars in the first quarter of this year, compared with 660 million in the like period of 1940. Crops yielding smaller income during this period included grains, vegetables, and tobacco. Government payments totaled 240 million dollars as compared with 291 million in 1940.

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
March:			
1941.....	617	71	688
1940.....	537	67	604
1939.....	517	95	612
1938.....	510	60	570
January-March:			
1941.....	1,834	240	2,074
1940.....	1,699	291	1,990
1939.....	1,581	192	1,773
1938.....	1,636	108	1,744

WHEAT: Good Crop

Good prospects for the winter wheat crop were reported for most areas last month, except in northern Missouri and portions of adjoining States where considerable winter wheat was killed by cold weather last November. A total crop of 616 million bushels of winter wheat was forecast on the basis of a projected yield of 13.3 bushels per acre seeded. This compares with 589 million bushels produced last year, and with 569 million average during the 10 years 1930-39.

Total wheat supply for 1941-42 may total approximately 1,200 million bushels, as compared with 1,099 million bushels for 1940-41. The 1941-42 figure includes winter wheat, spring wheat, and the largest carryover on record. Unless exports are increased—and this is unlikely—the carryover of wheat in July 1942 will total 500 million bushels, or approximately 75 percent of the domestic disappearance of wheat in a full year.

RICE: Outlook

Features of the rice situation and outlook for 1941-42 include prospects for an increase in seeded acreage in 1941 over 1940, a continued high level of domestic disappearance, a continuation of the larger-than-usual exports which developed in 1940-41, and a small carry-over at the beginning of the new season. Prices of rice in mid-April were the highest since December 1935.

COTTON: Prices Up

A new cotton crop has been planted, but an official report on acreage will not be available until July. Meanwhile, prices have been around the best levels for this season, and considerable loan cotton has been repossessed by producers. Domestic mill consumption of cotton continues at an unusually high rate, with no cessation in sight, and the possibilities are that consumption for the full year

will be more than 9½ million bales—the largest on record.

The cotton export situation shows no improvement, currently or in prospect. Total exports from last August through April were only 900 thousand bales, as contrasted with nearly 5.7 million bales during the like period a year earlier. Cotton mill consumption has been reduced in most foreign countries, and most of the export business that exists is in foreign cotton which is lower priced than American.

FEED: Ample

Production of feed grains this year may total 95 million tons. This figure is projected on the assumption that the acreage planted will be slightly smaller than in 1940, but that yields of corn will be above average because of the use of hybrid corn. Production of feed grains last year totaled 99 million tons. * * * But the total supply of feed grain for 1941-42 may be a near-record, on account of a prospective large carry-over from last year's crops.

(April 1 stocks of corn were the largest on record for that date, totaling 1,423 million bushels, as compared with 1,402 million bushels on the same date last year, and with 874 million bushels average for April 1 during the 5 years 1929-33. Of total stocks on April 1 this year, about 295 million bushels were sealed on farms, and 231 million bushels were held by the Government in steel bins and country and terminal elevators.)

As part of its food-expansion program, the Department of Agriculture has announced that the existing corn-loan program will be continued through 1941 and 1942; that the policy of making loan corn available to producers at the loan rate plus certain carrying charges will be continued; that producers in the commercial corn area who cooperate in the Agricultural Conservation Program will be allowed

to increase corn acreage up to their usual acreage, but that producers making such increases will not receive corn payments and will not be eligible for corn loans.

No referendum on corn marketing quotas will be held this year.

HOGS: Increase

Farmers are being urged by the Federal Government to increase pork production by feeding hogs to heavier weights this spring and summer, and by increasing the number of sows to be bred to farrow next fall. Inducement is that prices will be supported so as to yield a favorable corn-hog price ratio. Reason for the expansion program is that domestic consumer demand for food is increasing, and that products are wanted for export under provisions of the Lease-Lend Act.

Farmers indicated last winter they would breed 14 percent fewer sows for production of pigs this spring as compared with last. Prices subsequently improved, and it is possible that the 1941 spring pig crop may be larger than was indicated by this figure. Official reports on the size of the crop will not be available until June. Meanwhile, inducements are being offered producers to feed hogs to heavier weights; differentials in prices paid by the Government favor heavy as contrasted with light hogs.

The Department of Agriculture has announced that hog prices will be supported at a long-term level of \$9, Chicago basis, over a period ending June 30, 1943. Hog prices will be supported by purchases of hog products in the open market. In making such purchases consideration will be given the seasonal variations in prices and changing price relationships. The program *does not provide for a fixed price of hogs*. In case of speculative price increases, Government purchases of pork and lard may be released upon the open market.

CATTLE: Marketings

Cattlemen are being urged by the Department of Agriculture to increase their marketings of cattle for slaughter this year. Consumer demand is increasing, and larger marketings now may net producers a larger income than a few years hence when marketings may become excessively heavy in relation to consumer buying power. Cattle are among the few farm commodities now selling above parity.

Cattle on feed in the Corn Belt totaled 16 percent more on April 1 this year than last. (Ohio was the only Corn Belt State showing a decrease.) Market supplies of these fed cattle will be larger in the next few months than in the like period last year, but most of the increase will probably be in late summer and fall. Reports indicate that calves and light-weight feeder cattle were a larger proportion of the total number of cattle fed this season as compared with last.

Despite increased marketings this year, a continuing rise in consumer demand is expected to result in a generally higher level of cattle prices than in 1940. * * * Western range cattle came through the winter in good condition, and prospects for the 1941 calf crop have been generally good. Range conditions on April 1 were the best for that date since 1931.

LAMBS: Increase

Marketings of early lambs are fairly heavy now. The lambs are of better-than-average quality, and prices are higher than at this time last year. Grass-fat yearlings from Texas also are being marketed in volume. Sheep wintered well in the Western States, where favorable prospects for the late lamb crop were reported last month. (Lamb prices usually hold up well until June, but some decline ordinarily occurs in summer.)

The situation in early lambing

States and regions: California—slow finishing of lambs may delay marketings; Arizona—development of early lambs retarded by rain and soft feed; Texas—shipments expected to exceed those of a year ago; Southeastern States—unusually large number of ewes lambed before April 1, number of lambs saved was relatively large; Corn Belt—late spring in most areas of this region, but lambs in Missouri (principal early lambing State) made good progress; Northwestern States—favorable weather and feed conditions for development of early lambs, marketings may be earlier than usual.

WOOL: Higher Priced

United States production of wool this year will probably set a new high record. Mill consumption is at record high levels, the carryover of wool into the current season that began on April 1 was small, and large imports of foreign wool will be required to supplement domestic production. The 1941 domestic clip is selling at higher prices than the output last year, the cash income of wool producers likely will exceed last year's total of 110 million dollars.

Highlights of the current situation include continued large orders for wool fabrics for Army use * * * a high level of income of industrial workers * * * a weekly rate of consumption of apparel wool (scoured basis) the highest in more than 20 years * * * narrowing of the spread between prices of domestic and foreign wools.

Imports of apparel wool in the early months of this year were the largest since 1921. Supplies in South Africa and Australia probably are relatively large, but the growing shortage of shipping space and advancing freight rates will likely tend to restrict exports from these countries.

Imports of wool from Argentina and Uruguay have been unusually large in recent months.

FATS, OILS: Up

Domestic fats and oils stand in the best price position in several years. Notable has been the advance in prices of lard in recent months, as production has fallen below 1940 output. BAE looks for a stronger domestic demand for fats and oils the remainder of this year. An additional strengthening factor is that imports will be restricted by a reduction in available shipping space and by higher ocean shipping costs.

United States exports to Great Britain will probably increase, but exports to continental Europe have been practically shut off * * * It is expected that prices of domestic oilseeds will reflect any sustained rise in prices of vegetable oils in this country. But with abundant supplies of feedstuffs, and with prices of domestic oilcake meals at comparatively low levels, the price gains for oilseeds likely will be more moderate than for oils.

DAIRY: Increase

An adjusted program to increase the supply of food for national defense and Government purchases for export under the Lease-Lend Act calls for increased production of milk and manufactured dairy products this year. Increases are being sought through Government support to prices at levels favorable to dairy production; it is expected that the gains will be obtained through supplemental feeding of grains during the pasture season.

Production of milk is expected to reach a new high record next month, and to be maintained above last year's total during the remainder of the year. Increases among the manufactured dairy products are wanted especially in concentrated products such as evaporated milk, and cheese for export. Production of these products could be increased by paying higher prices for them in relation to butter.

Under the expansion program, large quantities of concentrated dairy products could be exported and still leave supplies for domestic consumption at least as large as in 1940 when production and consumption of milk and dairy products were the largest on Government record.

TRUCK CROPS: Supply

Government truck crop specialists report that somewhat larger acreages of most spring truck crops had been planted this season than last but that unfavorable weather reduced yields and in some instances caused complete crop failure. There was considerable replanting of lost acreages in some cases, and this has resulted in a late harvest. The situation indicated the possibility of a heavy concentration of marketings this month and next, and the likelihood that prices of truck crops in general would trend downward during this period. Even so, prices may average slightly higher than in the like period of last year, since consumer buying power is much improved over that of last season.

April reports indicated that more vegetable seeds of nearly all kinds will be harvested this year than last. Basis is an increase in both acreages and yields. Especially large increases in production were indicated for mangelwurzel, leek, spinach, mustard, cabbage, kale, eggplant, cucumber, Swiss chard, and nonsweet corn. Decreases in production were indicated for salsify, lima beans, and parsnips.

CANNING CROPS: Program

A program to expand the production of tomatoes for canning by 50 percent to meet probable demands for canned tomatoes under the Lend-Lease Act, and for distribution by the American Red Cross as well as for school lunch, relief and other purposes, was announced last month by Secretary Wickard. Smaller quantities of peas, corn, and snap beans may also

be purchased from time to time. It was announced that the Federal Surplus Commodities Corporation, in considering bids, will make allowance for increases of from \$2.75 to \$3.00 per ton of tomatoes over 1940 contract prices to growers. Growers who participate in this program will not incur any deductions from their AAA payments because of increases in acreages for canning.

FRUITS: Big Supply

Market supplies of strawberries have been unusually large this season, but consumer demand is good, and returns to growers should be better this year than last. Estimates are that production of early strawberries totaled 2.5 million crates, as compared with 2.0 million last year; that the second-early crop (normally marketed during May) totals 4.3 million crates, as compared with 3.1 million in 1940.

Figures on supplies of apples indicated in late April that there would be 2 million bushels more apples to be marketed during the remainder of the season as contrasted with the like period last year. But consumer buying power is higher this season than last, and apples have been selling at higher prices than a year ago. . . . April figures also indicated larger supplies of oranges and grapefruit this season than last. Oranges have been selling higher than in 1940; grapefruit have been selling lower.

Unusually large supplies of dried prunes will be carried over into the 1941-42 marketing season; but supplies of raisins are below normal proportions. Estimates of carry-over of dried fruits available for regular trade channels total 92,000 tons of dried prunes, 17,000 tons of raisins, and 5,100 tons of dried apricots. In addition, it is likely that a part or all of the 33,000 tons of dried prunes and the 31,000 tons of raisins in the surplus pools will be carried over.

POULTRY: Increase

Output of chicks by commercial hatcheries in the first quarter of 1941 was the largest on record for that time of year. Increases are expected in the second quarter, stimulated now by the Government poultry and egg expansion program. Production of commercial broilers in the first quarter of this year also was the largest on record for that period.

These increases indicate that supplies of chicken meat will be larger in the second half of 1941 than in the like period of 1940. But consumer demand continues to rise, and prices of chickens will average higher this year than last. Turkeys also are expected to sell for higher prices this year than last, even though the number marketed may be the same as in 1940.

EGGS: Increase

A considerable increase in total production of eggs is expected to result from the Nation-wide drive by the Department of Agriculture "to produce every possible egg from present laying flocks this spring and summer." Poultry specialists say this goal can be achieved by ample feeding and by filling the Nation's poultry houses to capacity with laying birds this fall.

Feed supplies are plentiful, prices of feed are moderate, and the Department has announced it will support prices at levels remunerative to producers. Ample feeding means that egg production, which usually begins to decline in June, should remain at relatively higher levels in the late summer months. The Department says that an increase of about 15 percent in chicks raised this year compared with last is advisable in order to fill poultry houses to capacity this fall and next spring with laying hens.

The feed-egg price ratio is much more favorable to producers than at this time last year.

FRANK GEORGE.

THE TAX OUTLOOK FOR FARMERS

AMERICA'S defense-and-aid program will add about 40 billion dollars to Federal expenditures during the next few years. It is generally agreed that a large part of these increased expenditures should be met as they are incurred by increased taxes paid especially by those whose incomes expand as a result of defense spending. With this in prospect and with rapidly changing developments in the economic life of the Nation, questions arise touching the probable influence of our defense efforts on the tax payments of farmers.

Will State and local taxes, hitherto the most important paid by farmers, increase markedly in the years immediately ahead? Will new taxes levied by the Federal Government or revision of existing revenue measures add substantially to the tax payments of farmers? Will farmers contribute heavily to defense by payment of taxes levied on others and hidden in the price of things purchased or sold? Such questions while specific enough and very pertinent admit of answers which can indicate only the probabilities. In the nature of things the answers cannot be conclusive.

THE clue to what is a reasonable expectation for the near-term trend of the more important farm taxes is the probable behavior of State and local governmental expenditures. If these remain reasonably stable supporting taxes will have no reason to advance sharply. Unless there should develop unforeseen changes in the pattern of services rendered by State and local governments—and World War experience does not indicate that this is probable—no important change in expenditures is in prospect for the period of our defense effort save such as might arise because of advancing prices of commodities purchased and salaries and wages paid by these governmental units.

During the World War period general departmental expenses of States as reported to the Bureau of the Census showed the following percentage increases over 1915: 1916, 6.4 percent; 1917, 12.5 percent; 1918, 25.0 percent; 1919, 43.2 percent. Comparable data for this period are not available for all local governments, but similar data for 146 cities indicate that for the period as a whole the increase in municipal

general departmental expense was somewhat less than 28 percent. From these figures the inference seems warranted that State and local general departmental expenditures rose very moderately under the lifting influence of the general inflation of the period.

That the increases in general departmental expenses were much less than increases in the price level and many classifications of wages is partially ex-

Index Numbers of Wholesale Prices and Selected Expenditures of States and Cities

(1915=100)

Year	Wholesale prices ¹	48 States ²		146 cities ²	
		General departmental expenditures and interest	Capital outlays	General departmental expenditures and interest	Capital outlays
1916...	126	106	89	-----	-----
1917...	175	112	71	108	86
1918...	193	125	70	-----	-----
1919...	205	142	75	127	77

¹ Based on Bureau of Labor Statistics' index.

² Based on expenditures reported to Bureau of the Census.

plained by the fact that payments for governmental services are frequently controlled by law. This makes them relatively unresponsive to the price-lifting pressures of an inflationary period. Unmeasurable, but not without influence after 1917, was the pressure to curtail civilian and, by implication, State and local government expenditures in order to permit fullest availability of national resources to the Federal Government. As is to be expected, this is clearly revealed in the reduction of outlays for capital expansion. But it may also have been a force which kept operating expenses in check.

After the conclusion of hostilities and demobilization there was a pronounced upsurge in State and local expenditures. Not only were deferred expenditures for permanent improvements now rapidly made good, but general departmental expenditures also rose sharply. By 1922, despite a sharp reduction in the price level following 1920, State and local expenditures were on a distinctly higher level.

IN THE present situation possible inflationary pressure to raise State and local expenditures may in many cases be temporarily offset by reduction in current relief outlays. The general business and industrial activity that is essential to support higher prices and wages should simultaneously reduce unemployment. The effects of improved industrial activity are quickly realized in lowered relief costs. According to data compiled by the Social Security Board payments for general relief made by State and local governments in 33 States for which comparable information was available fell 21.5 percent from November 1939 to November 1940. If the Federal Government succeeds in efforts to keep prices and wages from rising markedly despite feverish industrial activity the expenditures of State and local governments may conceivably decline.

All things considered it seems safe to conclude that for the immediate future no increase of consequence in State and local expenditures is to be expected. This prospect warrants the conclusion that the farmers' tax bill for State and local government will not be increased significantly by the defense effort unless and until reductions that occur in relief expenditures and emergency deferments are more than offset by price advances that increase the cost of government.

THE Federal tax legislation of 1940 did not add substantially to farmers' tax payments except as the increases in excise taxes, notably those on motor vehicles, gasoline and lubricating oil, are paid by farmers. How much the reduction in personal exemptions to \$800 for single and \$2,000 for married men will add to Federal income tax payments of farmers is not known, but the probabilities are that the increase will not be great. Whether the Federal Government will levy new taxes that will add substantially to those now paid by farmers remains to be seen. The tendency so far has been to continue the conventional Federal taxes and to emphasize the taxation of surplus income especially as it may accrue to business corporations during our defense effort. A general sales tax, often mentioned as a defense measure, does not now appear to have general support. If levied it would add substantially to the tax burden of consumers including farmers.

ANY appraisal of tax burdens must consider the possibility that taxes levied on one individual or group are transferred to others disguised in altered prices. The possibility that important defense taxes may be so shifted deserves examination. Is it probable that the corporation net-income and the excess profits taxes,

the individual net-income tax and the excises are so shifted?

Without attempting to be exhaustive and confining discussion to the particular problem of shifting it may be said that economists are in substantial agreement that taxes levied on the net income of corporations—including excess profits—are not commonly transferred to others through price changes. Supporting this view is the consideration that for many corporations competitive conditions are such that market prices must be accepted as beyond their individual control. Additional support is found in the fact that changes in prices are not apt to occur because of tax-induced changes in market supplies. Taxes on corporate net income are not costs of production. They represent fractions of what is left after costs have been met. Their payment therefore does not influence the volume of output that each unit finds most advantageous. Neither do such taxes affect the output of competing firms which are exempt either because of a non-corporate form of organization or because of unprofitable operations. Hence the total supplies offered the market will remain substantially unaffected and prices unchanged.

WHERE competition is less perfect and individual firms have some freedom in determining prices the probabilities that the corporation net-income tax will inspire price changes are small. This is so because payment of the tax bestows upon the corporation no new power to alter prices, and no particular incentive to do so. The price relations that are most advantageous to the corporation before such tax is paid remain so after. Treasury participation in the net earnings will not change the prices at which such earnings are greatest. To attempt to shift the tax would result in reducing what is left to the corporation. In the interest of stockholders themselves prices are best left unchanged.

For these reasons any marked changes in prices that may appear during our defense effort will not be the result of successful shifting of corporate net income and excess profits taxes. The causes will lie elsewhere. Distasteful and burdensome as these taxes may be, corporation management as a rule has no satisfactory way to unload them.

Similarly the individual net-income tax successfully resists all efforts to shift it. Avoidance of the tax is indeed possible—by the unlikely process of foregoing income. But if income is received and the tax paid there is no way to transfer it to others. The basic reason is the same as for the corporation tax. Such payments bestow no new power to determine prices. They must be borne by the original payer.

UNLIKE the taxes so far discussed the excises are generally shifted. It is to be expected that any increase in excise taxes on tobacco, liquor, gasoline, and the like, will raise the price at which these commodities are sold or will depress the price of materials entering into their manufacture. On occasion it will do both.

In what significant ways do such taxes differ from the net-income taxes which, as we have seen, defy attempts to shift them?

Most important is the fact that these taxes are levied in such a way as to be unavoidable costs of production. A tax on each gallon of gasoline sold is as inescapable a cost as the outlay for crude oil or labor. No gasoline comes to market on which the refiner or blender has not incurred special expense by paying the tax. Under such circumstances it is only a matter of time until the pressure exerted by an increase in the tax affects related prices. The greater part of such taxes is shifted forward in higher prices to consumers. Some are thrown back at least in part upon the suppliers of raw materials and labor. Only if

the tax is insignificant in amount will it be absorbed by the original payer.

IN summary it may be said that the defense effort has so far not added materially to the tax load of farmers except as they are paying somewhat higher Federal excise taxes than a year ago. The future, however, promises larger payments. If inflation can be largely avoided no significant increase in State and local taxes need be anticipated. Increased taxes will be connected with Federal needs. To the extent that the Government satisfies its tax requirements through increases in the rates levied on excess profits and corporate and individual net incomes the farmers will be largely

spared. But the vast sums to be spent on defense can hardly be raised by such taxes supplemented only by loans representing actual savings. Thus the choice is between two general alternatives. Provisions must be made for new measures which like the general sales tax compel heavy contributions from all income groups, or we shall drift into inflation. Inflation, highly objectionable on other counts, is in itself a harsh taxing device. For the vast majority inflation would be a regrettable choice. Farmers like most other groups have a definite interest in avoidance of fiscal measures that encourage its development.

ALVIN S. TOSTLEBE.

Decline in Farm Mortgage Debt

FARMERS owed 6.9 billion dollars of farm mortgages as of January 1, 1940. This compares with 7.1 billion in 1939, and with the all-time high of 10.8 billion in 1923. The debt at the beginning of 1940 was the smallest since 1919, but much of the reduction during this 22-year period represents foreclosures during the depression of

the early 1930's. The reduction in recent years has been more the result of improved farm economic conditions and the Government efforts to relieve the strain of mortgage debt on farmers.

Most of the reduction in debt during 1939 was in mortgages held by the Federal land banks and Land Bank Commissioner. Together, these two

Total Farm Mortgage Debt and Amounts Held by Selected Lender Groups, United States,¹ Jan. 1, 1910, 1915, 1920, 1925, 1930, 1935-40

Year	Total farm-mortgage debt	Federal land banks and Land Bank Commissioner	Joint stock land banks ²	Life insurance companies	Banks ³	State credit agencies ⁴	Others ⁵
	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>1,000 dollars</i>
1910.....	3,207,883			388,961	406,248		2,414,654
1915.....	4,990,785			669,984	746,111		3,574,690
1920.....	8,448,772	296,386	60,038	974,826	1,204,383	(6)	5,913,139
1925.....	9,912,650	923,077	446,429	1,942,024	1,200,456	(6)	5,400,064
1930.....	9,630,768	1,185,765	620,980	2,105,477	987,468	93,274	4,621,804
1935.....	7,785,971	2,601,824	255,931	1,258,900	498,842	62,286	3,208,188
1936.....	7,638,867	2,853,966	175,677	1,054,770	487,505	48,091	3,018,858
1937.....	7,389,797	2,888,912	153,499	936,454	487,534	32,657	2,910,741
1938.....	7,214,138	2,835,962	104,163	895,470	501,450	24,657	2,852,436
1939.....	7,070,896	2,723,022	87,302	887,336	519,276	17,281	2,836,619
1940.....	6,909,794	2,583,901	65,719	883,414	534,170	14,823	2,827,767

¹ Excluding possessions.

² Including banks in receivership.

³ 1935-40 insured commercial banks; prior to 1935 open State and national banks.

⁴ Rural Credit Board of South Dakota, Bank of North Dakota, and Department of Rural Credit of Minnesota.

⁵ Including loans of individuals, Farm Security Administration, mortgage companies, and other miscellaneous lenders.

⁶ Unavailable.

lending agencies held 2.6 billion dollars of farm mortgages at the beginning of 1940, as compared with 2.7 billion in 1939. (As of September 30 last, about 24 percent of the number of loans by these two agencies were delinquent.) Other institutional lenders showing reductions included the life insurance companies, joint stock land banks, and State credit agencies.

The life insurance companies held less than 900 million dollars of farm

mortgage debt at the beginning of 1940, as contrasted with 2 billion dollars at the beginning of 1930. Approximately 70 percent of the debt held by these companies is on farms in the North Central States—especially in Iowa, Indiana, Illinois, and Missouri. At the beginning of 1940 the mortgages held by the life insurance companies represented 2.9 percent of their assets, as contrasted with 3.1 percent in 1939.

Farm Products: Producer to Consumer

II: At Country Points

IN THE evolution of our marketing system for farm products the farmer has continually been making adjustments and acquiring knowledge and experience which better equips him to handle his marketing problems. The economic world in which he lives, however, is dynamic and not static and conditions have been constantly changing. New technological processes are continually being developed and these have contributed to changes in marketing and have affected the farmer's position in the marketing structure. The trend in country market organization and facilities has been largely in the direction of greater complexity, with outlets to the farmer increasing, new types of processing plants being developed, and competitive relationships changing. The basic reason for much of the change that has occurred, therefore, has been technological developments, especially in the field of transportation and in processing techniques.

PRIOR to the development of the railroads inland transportation was limited to the rivers and canals and what could be carried by wagon over very poor highways. The farmer then was greatly restricted in the choice of

markets and as to marketing methods. The shipment of perishable products any great distance was not to be considered.

From about 1850 until shortly after the World War, the railroads were the dominating transportation medium; and during this 70-year period they not only facilitated the development of new producing areas but very largely determined the marketing methods and practices followed. They contributed to the establishment of many public stockyard markets, grain elevators, and other facilities used in the marketing of farm products. Refrigerator cars for transporting fresh meats came into use after 1870 and were first used for shipping fruits and vegetables in 1885. These cars revolutionized the marketing system for all perishables by bringing the large distributing centers within reach of the most distant producing areas, and thus not only increased available supplies but stimulated competition between areas and between different groups of farmers. In the last two decades the motortruck came into the picture, and with it came a further evolution of the marketing system which has affected many groups, and especially the farmer.

PRIOR to the coming of the motor-truck, the size of the railroad car in use tended to determine the unit of wholesale trading in some commodities; and this, together with minimum carload freight tariffs, often restricted farmers in their sales outlets. For instance, a livestock producer who did not have sufficient animals ready for market to make the minimum carload weight on which the full rate had to be paid was practically compelled to sell to a local buyer unless a neighbor would join with him in making up the weight deficiency. It was primarily this situation that caused farmers to organize livestock shipping associations in such large numbers in the period from 1912 to about 1925. They believed that the local buyer took too large a toll for his services and that higher net returns could be obtained if they pooled their stock so as to make full carloads and thus could ship to the large central markets.

Similar cooperative movements developed among producers of other commodities because of conditions which placed farmers at a disadvantage in the marketing of their products as individuals. All occurred largely during the period when farm products moved almost entirely by rail and the general practice was to send them to large central markets or concentration centers, either for processing or for redistribution to other points as needed. In almost every instance, these cooperative movements originated out of the dissatisfaction of farmers with the net returns for their products and with the marketing facilities available to them.

THE flexibility of motortruck transportation, both with respect to size of loads and time and direction of movement, made farmers less dependent on certain types of local cooperative organizations. Many of these organizations ceased operation after motortrucks came into more general use. This was especially true of livestock shipping associations, cooperative creameries, and cheese factories,

and many of the smaller organizations engaged in marketing poultry and eggs.

In general, the motortruck has tended to "individualize" farm marketing by making it possible for the farmer to sell as an individual rather than through a local cooperative association or a terminal agency. It has made more outlets available to him and has made country marketing more competitive. It has removed all restrictions as to unit of trading, size of load, time of shipping, and direction of movement, and has speeded up the movement of products. It has made the farmer less dependent on certain types of middlemen and to some extent has reduced the risks he formerly incurred from price declines while his product was en route to the central market. In order to take advantage of these new conditions the farmer, however, must have a better knowledge of grades and grading, more complete information as to demand and prices, and be more shrewd in the selection of his markets and in bargaining.

THE trend in cooperative marketing in more recent years has been toward larger organizations operating on a regional or Nation-wide basis, and the discontinuance of the small local associations which existed primarily to enable farmers to assemble small lots of products into carload units. These larger cooperative organizations function primarily as distributing and bargaining agents for their members in the sale of products to processors and other wholesale buyers. In some instances, especially those engaged in marketing fruits and vegetables, they also supervise all operations of assembling, sorting, grading, and shipping.

Producers who are not members of cooperative marketing associations do their own bargaining with prospective buyers or make use of the services of selling agents who operate on a commission or brokerage basis. These selling agents are more generally employed when sales are made at the

larger markets and distributing centers. There has been an increasing trend in recent years, however, for the producer to do his own bargaining and to sell direct, either at his farm or at some nearby concentration point or processing plant. These direct sales are to buyers who operate for their own account or as agents for a processor, wholesaler, or chain-store organization. Many of these buyers are classed as local or country buyers as distinguished from those operating on the central markets. They include local merchants, operators of local elevators, mills, cotton gins, creameries, or other processing plants, in or near the farmer's community, and those who personally bargain with the farmer at his farm or local shipping point and take delivery there. Sales to these country buyers comprise a larger proportion of farmers' total sales of all farm products than those made in any other way. While this method of selling on the part of farmers has tended to increase in recent years, there apparently have been some changes as to the types of local buyers. Sales to local stores have decreased but sales direct to processors, chain stores, and those who specialize in particular commodities have increased.

MENTION has been made that when the producer is his own selling agent, it is necessary that he be well informed regarding current prices and supply and demand conditions, otherwise he cannot bargain intelligently. To interpret market reports correctly, he also must have a fairly good knowledge of the grades on which prices are based, how grading is done, and the factors which determine grade. Information regarding consumer preferences as to grade also is helpful in planning his production as well as in appraising the market.

The last 20 years have witnessed great progress in the collection and dissemination of market information by the Department of Agriculture for the benefit of farmers and in the edu-

cation of farmers regarding marketing and the economic factors affecting the demand for their products. Information regarding current prices and supply and demand conditions at practically all important trading centers is now collected daily by trained reporters and broadcast by radio almost as rapidly as it is assembled. It is also distributed by mail and made available through the daily press. In addition, comprehensive analyses of the economic situation with respect to individual commodities are prepared by Department and State agricultural college specialists for release to the public from time to time, as conditions warrant.

The producer has much more and better market information available than ever before. His problem is to interpret it correctly. It must be remembered, however, that the marketing of farm products, like any specialized business, has its own technique and terminology which can be understood fully only after considerable experience and study. Producers who have had this experience obviously are in better position to use the Government market reports in bargaining for the sale of their products than those without it.

ONE of the great needs of producers in the selling of their products is more progress in grade standardization, a better understanding of grades and consumer preferences, and a more general practice of buying and selling on the basis of grade. Progress has been made in this field, but there is much yet to be done. In some products it has been especially difficult to define sharply the grades that have been proposed or established because the factors which determine the grade are not readily subject to physical measurement or test. The grades in such instances have to be delineated or described largely in abstract terms; and, consequently, they are not always interpreted the same way by different individuals. One obstacle that has

prevented greater accomplishment in standardization is that buyers and sellers frequently prefer to trade in ungraded lots in the belief that they can out-bargain the other party in the deal, and that a combination of grades will facilitate getting more favorable price terms than when each grade is sold separately.

IT should be emphasized that country marketing or that part of the marketing system in which farmers have direct personal contact is only one segment of the entire marketing structure. While possibly some econ-

omies in marketing costs might be effected here they would be small in relation to the total marketing spread. Developments in retailing, wholesaling and terminal market handling also are important to the farmer and the consumer, and changes in competitive relationships and costs in these more remote functions may affect the farmer even more than any that might occur in country marketing.

CHARLES A. BURMEISTER.

Practices and problems in the transportation of farm products from country points will be discussed next month.

Our Changed Farm Economy

THE estimates of gross and cash income from farm production currently published by the BAE may now be supplemented by estimates covering a much longer period. The current estimates are being made available for the years from 1910 to date. The supplementary estimates, an outgrowth of a joint research project of the BAE and the National Bureau of Economic Research, cover the period 1869 to 1937. This study supplies a much needed long-time record of production, prices and gross income by commodities and groups of commodities. These data have been prepared both on a crop year and calendar year basis to serve various purposes, and appropriate indexes of production, prices and income have been computed.¹

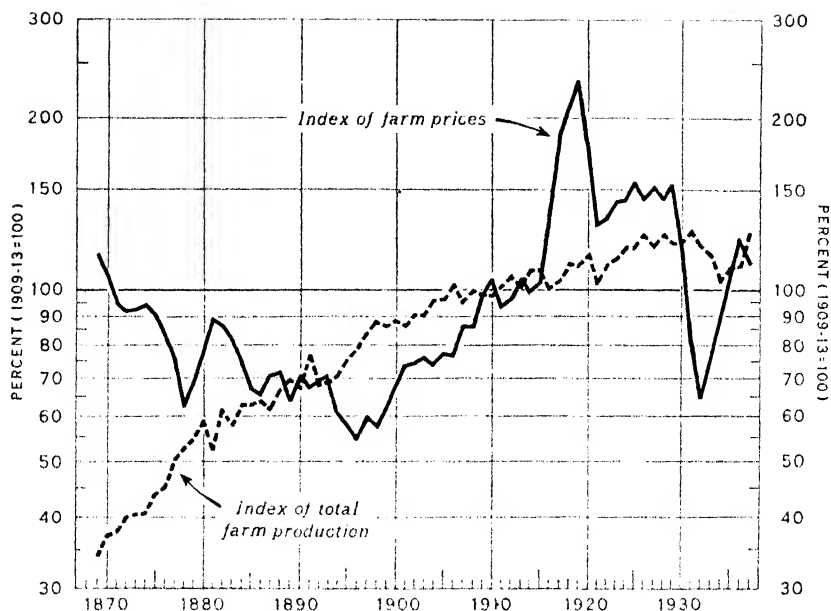
With these long-time estimates in hand, it is now possible to describe the long-time shifts in agriculture in terms of income as well as acreage and production. For example, livestock (chiefly meat animals) supplied about

40 percent of the gross income from all farm production in 1869 and only 26 percent in 1929, whereas the relative importance of dairy production as a source of income advanced from 16 percent to 33 percent in the 60-year period. Fruits also more than doubled in relative importance, rising from 2 percent of gross income in 1869 to 5 percent in 1929, while staple foods (including cereals, potatoes, beans, and rice) declined from 16 percent to 11 percent. The share contributed by textile raw materials (cotton, wool, flax) remained unchanged at about 15 percent of the total.

Changes in Gross Income From Farm Production Between 1869 and 1929

Products	Percent of total		Percent Increase in dollar values 1869-1929
	1869	1929	
	Percent	Percent	Percent
Staple foodstuffs.....	16	11	222
Fruits.....	2	5	1035
Dairy and poultry products.....	16	33	823
Textile raw materials.....	15	15	381
Livestock.....	40	26	207
Other.....	11	10	252
Total.....	100	100	350

¹ USDA Technical Bulletin 703, December 1940 *Gross Farm Income and Indices of Farm Production and Prices in the United States, 1869-1937*, by Frederick Strauss and Louis H. Bean.

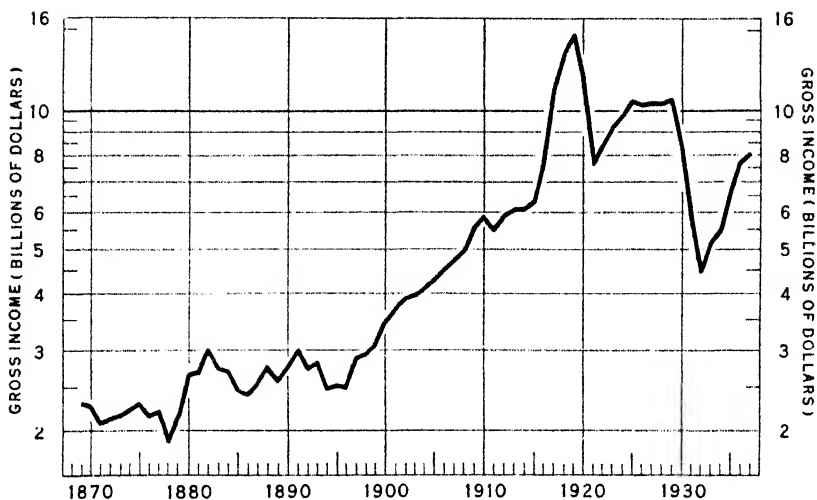


OUR knowledge of the long-time trend in agricultural production for all farm products as a whole is based chiefly on the official index of agricultural production covering 12 important crops. The present study now provides an index of total production including livestock and livestock products as well as crops. This more inclusive measure of production covering both crops and livestock differs little from the indices of crops alone up to about 1920, but from then on there is considerable divergence, the more comprehensive index continuing in line with the upward trend of the previous decade. This reflects chiefly the marked increase in the production of dairy and poultry products and truck crops, and production of livestock and livestock products per unit of feed crops.

The only index of prices received by producers starting before the World War heretofore available has been the index published by the BAE for the period 1910 to date. The present study makes available such a price index from 1869 to date, constructed in such a way as to be directly comparable with the long-time index of

production. These two indexes are shown in the above chart.

THE course of average prices received by farmers has been dominated chiefly by monetary and business conditions and only partly by changes in the aggregate volume of farm production. In a number of individual commodities dealt with in this study, it will be found that the variations in production assume greater importance as a price factor than is the case where all farm products combined are dealt with. Even in the general illustration contained in the chart it is evident that the average of prices of farm products is affected by the course of farm production in general. Thus, during the downward course of prices of the 1870's, 1880's, and 1890's, there were three periods when production exceeded the long-time trend—the late 1870's, the late 1880's, and the late 1890's. In the first and third of these periods, the large volume of production intensified the decline in farm prices that was due to other causes, and in the other it prevented farm prices from responding fully to the prosperity con-



ditions in the domestic markets. The rise in farm prices from the 1890's to 1914 was somewhat more regular than was the decline during the period after the Civil War, but here, too, the effect of volume in excess of normal on price is apparent, particularly in the years 1904-6.

After 1914 several highly distinct price periods are evident: (1) The inflation and deflation associated with the World War; (2) the sustained and relatively stable price situation of the 1920's; (3) the second major post-war price collapse between 1929 and 1932; (4) the rise between 1932 and 1937 associated with economic recovery, including devaluation of currency, Government expenditures, and two record droughts (1934 and 1936); and (5) the decline in 1937-38 associated with a decline in general business conditions and a return to conditions of surplus agricultural production and supplies.

THE variations in gross income from farm production that resulted from these long-time and short-time changes in production and prices are shown in the above chart. During the 25-year period ending with 1896, it is clear that gross income rose only moderately, the rapid expansion in production being nearly offset by the accompanying decline in prices.

The effect of variations in business conditions and in domestic demand is suggested in the cycles in income which reached their peaks in the prosperity periods of 1881-82 and 1891-92. From 1896 to 1914 the year-to-year variations in gross income are overshadowed by the very marked long-time upward trend. If the rise and fall in farm income associated with the World War is set aside, the long-time upward trend that started after 1896 may be said to have terminated in 1929. The decade since then may be described for the present as one of a downward trend in gross farm income, with marked departures below that downward trend in 1932, and above that trend in 1937. In fact, the entire period after the World War may now be described as one during which agricultural prices and income followed a downward course as they did after the Civil War, with two periods of prices and income markedly below the course of the downward trend (typified by 1921 and 1932) and two periods of prices and income above the course of the downward trend (typified by 1925-29 and 1937). These long-time records should give additional bases for comparison as the abnormal situations of the 1940's unfold.

L. H. BEAN.

Modern Farm Practice and Mechanical Power

AN almost complete revolution of farm power has occurred during the past 30 years. In 1910, the automobile, tractor, and truck were very much an oddity on farms. The horse, buggy, and animal-powered equipment were accepted modes of the farm. There are on farms today about 60 automobiles, 25 tractors, and 15 motortrucks for every 90 farms. Some areas and some farms have more than this quota of machines, many farms have none. Probably more than half the farmers own at least one of these machines. The use of motor units is greater, since many farmers not owning machines make use of tractors and trucks that do custom work.

Tractors are still being adopted rapidly, so that the proportion of machines to farmers is becoming greater every day. Since 1930, there have been only slight changes in the number of automobiles and trucks (table 1). But in these 10 years the number of tractors has nearly doubled. Factors of today that may accentuate this trend in tractor numbers are: (1) A reduction in the farm labor supply as defense demands for industrial labor increase; (2) a continued decrease in the number of horses and mules as demands for military use add to the difficulties raised by a lack of replacements; (3) the availability of efficient types of machines. A deterrent may be a reduction in available tractors and equipment, if defense demands for tanks and other mechanized equipment take over space now used in the production of farm implements.

THE use of machine power has changed the ways of farming and farm living, but animals and manpower are still used in varying degrees throughout the country. For ex-

ample, cradling grains is a hand method of harvest that is used for only 1 percent of our United States grain acreage, yet in the South about 20 percent of the grain is still cradled. In some areas, farm families can use an automobile to make available an urban or even metropolitan way of life; but, in other areas, the family rarely gets beyond the local crossroads. These changes in farm life are of vital interest to planning agencies concerned with the development of agricultural programs that are flexible enough to fit nearly all farm situations.

Some measurable types of change have recently been the subject of a survey by the Bureau of Agricultural Economics and the Agricultural Marketing Service. The use of tractor power, animal power, and hand methods in certain operations of producing and marketing major crops has been studied in a survey of 25,000 farms. Farmers reported conditions for their locality, so that the results are widely representative.

Tractors are used to the greatest extent in the Great Plains, the Corn Belt, the Pacific coast, and the Rocky Mountain States. They are fairly important in the northeastern dairy

Table 1.—Number of Tractors, Automobiles, Motor Trucks, Horses and Mules 2 years old and over, on Farms, and Number of Farms January 1, Specified Years ¹

Year	Tractors	Auto- mobiles	Motor trucks	Farms	Horses and mules
	<i>Thous.</i>	<i>Thous.</i>	<i>Thous.</i>	<i>Thous.</i>	<i>Thous.</i>
1910	1	50	0	6,362	19,429
1915	25	472	25		21,866
1920	246	2,146	139	6,448	22,386
1925	549	3,283	459	6,372	21,038
1930	920	4,135	900	6,289	17,981
1935	1,048	3,642	890	6,812	15,471
1940	1,610	4,185	935	6,091	13,368

¹ Data from Census, Bureau of Agricultural Economics, and Agricultural Marketing Service.

² Preliminary.

States, but are relatively unimportant in the South—that general area beginning with Louisiana and Arkansas on the west and including all States south of the Ohio River and below Maryland on the Atlantic coast. In general, tractors are used much more for heavy-duty jobs than for light work. For breaking land and disking, the study shows that tractors supply the power for more than 55 percent of the work done.

GREATEST advances of machine power and equipment in the production of major crops have been among the small-grain crops. Small-grain production is now relatively concentrated in broad, open areas that are favorable to the use of large machines. Thus, wheat and the Great Plains are practically synonymous; large acreages are also grown in the Pacific Northwest.

Machine methods have long been available for the various operations concerned with small-grain production. The major development of the past 30 years has been the substitution of the internal-combustion engine for animals and steam engines, but old methods and facilities have been streamlined and there have been other significant innovations and developments. Today, approximately 70 percent of breaking land, disking, and harvesting of small grains is done with machine power. Ninety percent of the small grains is marketed by machine. However, animal power is still important for the lighter jobs of drilling seed, and for harrowing. (Table 2.)

Extensive adoption of machine power has reduced greatly the need for labor in small-grain production. Even with equipment of the same size, more work can usually be done in a given time with machine power than with animal power. Reduction in labor varies among the small grains. At the present time, total farm labor expended for each acre of wheat harvested is probably somewhat less than

7 hours. Thirty years ago more than double this amount of labor was needed to grow, harvest, and market an acre of wheat.

IN the Southern Great Plains and in some major wheat areas, labor needs have been reduced as much as 75 percent, largely since 1920. With 60 million acres of wheat, farm employment in wheat production has been reduced by at least 40 million man-days. Displacement of labor is most pronounced during the harvest season and in the major wheat areas. Needs for regular monthly labor, especially for preparing the seedbed and for hauling grain, have also been reduced greatly.

Largely responsible for the labor saving effected in small-grain production has been the farm tractor. With larger power units available on many farms, larger equipment has come into general use, especially for preparing the land and seeding the crop. The combine has cut harvest labor needs by almost 75 percent. In many wheat areas, 3 men with a combine, a tractor, and a truck can now harvest and market or store the grain from 30 acres of wheat in a 10-hour day. Thus the harvest labor now amounts to but 1 hour per acre. Before the coming of the combine, the tractor, and the motortruck, about 4 hours of labor were used for harvesting with a header, for stack threshing, and for marketing the grain. Somewhat more labor was used with the binder-thresher method than with the header-thresher method.

HAY crops continue to be harvested largely with animal power. For the country as a whole, about 85 percent of the cutting of hay and the hauling or dragging of hay from fields to barns or stacks was done with animal power in 1939. Use of mechanical power in haymaking was relatively unimportant in practically all areas but was most pronounced in the Pacific Coast and New England States. Labor savings from the use of machine

Table 2.—Importance of Mechanical Power in the Production of Small Grains ¹

Geographic division	Percentage of work done with tractor power						Haul to market with—	
	Breaking land ²	Disking	Harrowing ³	Drilling seed	Harvesting		Auto and truck	Tractor
New England.....	30	49	50	9	26		81	
Middle Atlantic.....	48	61	49	10	45		89	1
East North Central.....	67	69	52	24	58		86	2
West North Central.....	78	74	61	53	75		89	1
South Atlantic.....	17	30	14	7	35		76	1
East South Central.....	14	25	10	5	29		72	1
West South Central.....	68	68	62	68	77		88	1
Mountain.....	75	69	56	57	64		93	
Pacific.....	79	82	69	68	79		96	1
United States.....	71	70	57	48	69		89	1

¹ Based on more than 25,000 reports obtained from crop correspondents, February 1940. The small grain crops include wheat, oats, barley, rye, flax, rice, buckwheat, and small grain mixtures.

² Includes plowing with moldboard and disk plows, listing, bedding, and middle busting.

³ Includes spike-tooth and spring-tooth harrowing.

power in haymaking are not very great, unless large-sized haymaking equipment is used. With the haymaking equipment available, most farmers generally prefer work stock for haymaking. The small hay acreages on many farms make it expensive to have hay equipment large enough to use effectively the available tractor power.

SINCE 1910, there has been a reduction of more than 25 percent in the amount of farm labor used in the production of an acre of corn. Most of this reduction has taken place since 1920. Shifts in corn acreage, larger teams, and the increasing use of large cultivators and other equipment have contributed somewhat to the reduced labor needs, but the tractor has contributed most to the reduction in use of labor in corn production. The tractor has increased greatly the power available on many farms, and the size of machines and implements has kept pace with the increased power. Also, the capacity of machines and other equipment is usually greater when operated with machine power than is the case for machines and equipment of corresponding size operated by animal power.

The sharpest reduction in utilization of labor in corn production has

taken place in the western and central Corn Belt. On many Corn Belt farms an acre of corn is now produced with about half the farm labor needed for its production 30 years ago.

The heavy-duty jobs of seedbed preparation have been the easiest to switch over to machine power, so that labor reduction and machine adoption have been greatest in operations such as breaking and disking land. The next steps of planting and cultivating are not so advantageous to mechanical power. For these operations, animals still do most of the work in the country as a whole. When it comes to cutting corn, the knife-swinging men are still laying down about 40 percent of the corn cut. Man really predominates in corn harvest operations. Only 13 percent of the corn for grain is harvested by mechanical pickers. Most of the remainder is husked or snapped by hand. (Table 3.)

COTTON growers use mechanical power to a lesser extent than do producers of any other major crop. But there are important areas where machine power is extensively used for preparing the seedbed, planting, cultivating, and hauling the seed cotton to gins. Use of mechanical power is most pronounced in the irrigated areas,

Table 3.—Importance of Tractor Power in Preparing Land, Planting, Cultivating and Cutting Corn, by Geographic Divisions, 1939 ¹

Geographic division	Percentage of work done with tractor—					
	Breaking land ²	Disking	Harrowing ³	Planting	Cultivating	Cutting corn
	Percent	Percent	Percent	Percent	Percent	Percent
New England	40	51	39	9	13	14
Middle Atlantic	49	62	49	6	16	16
East North Central	70	72	55	7	42	17
West North Central	74	69	56	22	48	43
South Atlantic	13	24	11	1	3	2
East South Central	12	23	9	2	5	2
West South Central	27	30	21	16	16	22
Mountain	75	70	53	44	41	25
Pacific	71	73	56	20	25	17
United States	51	53	39	13	30	22

¹ Based on more than 25,000 schedules obtained from crop correspondents, February 1940. The above data are applicable to the 1939 crop.

² Includes plowing with moldboard and disk plows, listing, bedding, and middle busting.

³ Includes harrowing with spike-tooth and spring-tooth harrows.

especially in California and Arizona, but producers in the western cotton areas of Texas and Oklahoma and the black prairies of Texas also use machine power extensively. In the river bottom areas, the use of tractors has been increasing in recent years, but animal power is still principally used for producing cotton.

In cotton areas east of the Mississippi River, and in the western hilly areas of Arkansas, Louisiana, Texas, and Oklahoma, mechanical power is used only to a limited extent for growing the crop. There are several reasons for the relative slowness with which cotton growers have adopted machine power. Satisfactory and economical machine methods for harvesting the crop and for thinning and hoeing the crop are yet to be developed. These are important jobs and together normally utilize about two-thirds of the total labor needed for producing the crop. These jobs are still done by hand. The fact that farm labor must

be available for hoeing and picking tends to slow the adoption of machine power. Until satisfactory machines are developed for these jobs, general adoptions of machines for cotton production must lag.

Other factors such as small farms, rolling land, irregularly shaped fields, low wage rates, and low cotton prices, have been important factors which have retarded mechanization in the production of cotton. Since 1910, the amount of labor needed to produce an acre of cotton has been reduced about 20 percent. Increased work resulting from new demands such as weevil control and terracing has been more than offset by the use of more machine equipment, the opening up of western areas requiring less labor to produce cotton, and the more prevalent use in these new areas of harvest by snapping rather than picking.

A. P. BRODELL.

ROBERT C. TETRO.

Paid in Full

Farmers and ranchers in 1940 paid 30,300 Federal land bank and Land Bank Commissioner loans in full in advance of the time when due. Governor A. G. Black of the Farm Credit Administration says that this is the greatest number of loans paid in advance in any year since FCA was created, and brings to more than 141,000 the number paid off in this way since 1933.

PARITY PAYMENTS IN 1941

Rates of parity payments to be made to growers who plant within their 1941 acreage allotments of cotton, wheat, corn, rice, and tobacco were announced last month by the Department of Agriculture. Payments will be based on the normal yield of each producer's acreage allotment, and will be in addition to the regular agricultural conservation payments made to farmers under the 1941 Agricultural Adjustment Program.

The accompanying table shows the rates for conservation payments, parity payments, and total payments which will be made to cooperating farmers.

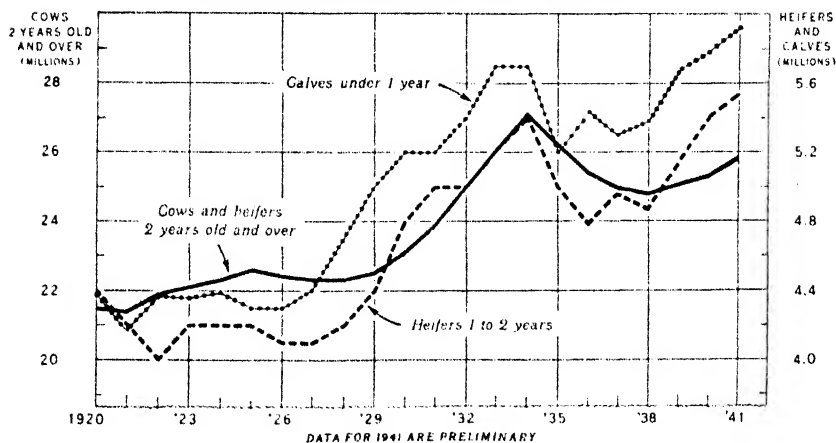
The only change in the procedure for determining rates for 1941 parity payments, as compared with the 1940 program, is that the "75-percent rule," formerly applying, has been eliminated. This rule provided that payments could not be made on crops which already were at 75 percent of

parity, and specified further that if farm prices of a commodity were less than 75 percent of parity, the payment could be large enough only to make up the difference. As a result, the parity rate for rice is higher than in 1940 and payments are being made on tobacco for the first time.

The 1941 parity rates will be applied to approximately the same production of wheat, corn, and rice as were the 1940 rates, and to about 4 percent more cotton production, because of an increase in the normal yield of cotton.

	Agricultural Conservation 1941	Parity, 1941	Total Payments, 1941
Cotton, cents per lb.	1.37	1.38	2.75
Wheat, cents per bu.	8.0	10.0	18.0
Corn, cents per bu.	9.0	5.0	14.0
Rice, cents per cwt.	5.5	20.0	25.5
Flue-cured tobacco, cents per lb.	0.8	0.6	1.4
Fire-cured tobacco, cents per lb.	1.5	0.2	1.7
Cigar filler and binder, cents per lb.	0.8	0.7	1.5

COWS, HEIFERS, AND CALVES BEING KEPT FOR MILK
COWS, UNITED STATES, JAN. 1, 1920-41



During the past 2 years—1939 and 1940—the price of milk cows has averaged higher in relation to the general level of prices of farm products than in any other 2-year period since 1910. Beef cattle also have been relatively high in price. With these relatively high prices, farmers have been saving a large number of heifer calves, holding back breeding stock, and expanding their herds. Increases in numbers of milk cows have followed, and the number of young dairy stock on farms is relatively large. A further increase in numbers of cows is in prospect.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1924=100) ²	Cost of living (1924=100) ³	Wholesale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in ⁶				
					Living	Production	Living and production		
1925	91	98	101	151	164	147	157	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	158	147	153	180	281
1930	91	88	96	126	148	140	145	167	277
1931	75	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	75	96	109	108	109	85	187
1934	75	61	77	109	122	125	123	95	178
1935	87	69	79	117	124	126	125	103	180
1936	103	80	80	118	122	126	124	111	182
1937	113	94	83	126	128	135	130	126	187
1938	88	73	81	115	122	124	122	125	180
1939	108	84	80	113	120	122	121	123	190
1940	122	95	81	115	121	124	123	126	.....
1940—April	111	88	81	115	.....	.....	123	124	.....
May	115	88	81	114	.....	.....	123	.....	.....
June	121	90	81	113	121	125	123	.....	.....
July	121	93	81	113	.....	.....	122	129	.....
August	121	86	81	113	.....	.....	122	.....	.....
September	125	99	81	114	121	123	122	.....	.....
October	120	101	81	115	.....	.....	122	129	.....
November	132	104	81	116	.....	.....	122	.....	.....
December	138	108	81	117	122	125	123	.....	.....
1941—January	139	110	81	118	.....	.....	123	124	.....
February	141	111	81	118	.....	.....	123	.....	.....
March	143	112	82	119	.....	.....	123	.....	.....
April ⁷	.....	.....	.....	121	.....	.....	123	.....	.....

Year and month	Index of prices received by farmers (August 1900-July 1914=100)								Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	161	158	153	149	96
1929	120	144	141	140	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	106	108	95	78
1939	72	73	77	105	110	104	94	93	77
1940	85	81	79	114	108	113	96	98	80
1940—April	96	85	81	128	104	110	82	98	80
May	92	83	88	117	108	106	84	98	80
June	83	81	104	112	102	104	81	95	77
July	78	80	89	98	110	105	88	96	78
August	76	77	79	107	110	109	90	96	79
September	77	76	73	114	114	111	104	97	80
October	80	78	79	99	112	116	112	99	81
November	83	79	71	98	112	121	120	99	81
December	81	79	75	93	111	128	122	101	82
1941—January	84	80	78	117	130	121	100	104	85
February	81	80	80	156	130	118	90	103	84
March	84	82	83	134	129	118	90	103	84
April	90	88	89	161	137	121	104	110	89

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation. Revised April 1941.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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HIGHER FARM COMMODITY LOANS sparked the markets during the past month . . . prices of wheat, corn, cotton, tobacco, and rice rose to new high marks in more than a year. * * * but-tressed also were the prices of livestock, poultry, and dairy products under Food-for-Defense Programs. Prospects for farm income in 1941 were raised above earlier estimates. * * * Total agricultural production may be a little larger this year than last, notwithstanding the smaller 1941 pig crop. Crops and livestock are in good condition, feed for livestock is abundant, producers generally are responding to the expansion program on foods for national defense. * * * Wheat growers have voted for marketing quotas on this year's crop. This means that commodity loans—raised now—will be available to wheat producers. Increased commodity loans on all basic crops, plus conservation and parity payments, have raised per unit returns to growers close to the 1910-14 parity goals established by Congress. * * * Continued maintenance of close-to-parity levels now depends largely on prices farmers must pay for commodities used in production. Costs of production are higher this year than last.

Commodity Reviews

DEMAND: Rising

FURTHER improvement in industrial employment and pay rolls and in consumer demand for farm products is expected during the remainder of this year. Industrial production recovered quickly from the relapse brought on by industrial strikes in April and has already reached a new peak. Further stimulation to industrial activity will come from continued expansion in defense expenditures, already around 900 million dollars a month as contrasted with only about 17 percent of this sum a year ago.

Increased employment arising largely from the defense and aid-to-Britain efforts and widespread increases in wage rates have resulted in a substantial rise in consumer buying power. This increase will likely be manifested most in purchases of nondurable goods such as food and clothing, since the production of durable consumer goods is being limited by the needs for national defense. Already, the automobile industry has agreed to produce 20 percent fewer 1942 models than 1941 models.

United States exports of agricultural products have increased slightly in recent months, and an extension of the gains is expected under provisions of the Lease-Lend Act. The Department of Agriculture has been buying large quantities of food products of the kind needed by Great Britain, presumably for export to that country as well as for distribution under various relief and nutrition programs in the United States.

P. H. BOLLINGER.

FARM LABOR: Supply

Despite widespread reports of farm labor "shortage" there was no evidence in mid-May that farm production schedules had been curtailed. Production of milk was setting new high records, southern truck crops were rolling to market in good volume,

and field crops were being planted in about the same volume as last year.

AMS commented that "in the past, farmers have found it possible, in the face of reductions in the supply of farm labor and increasing wage rates, to cut production costs by working longer hours and by calling upon additional members of their families to help with work that had previously been done with hired help. * * * Apparently, the curtailment in the labor supply (this season) has not made it necessary to withdraw an unusual number of children from school to assist with spring planting."

Crop correspondents indicated that "higher farm wage rates are encouraging increased purchases of farm machinery."

PRICES: Higher

Prices of farm products rose further during the past month, stimulated by Federal legislation providing for higher commodity loans on basic farm commodities. The index of prices of all products combined was 112 in mid-May, and was probably a little higher later in the month. The index of prices paid by farmers also rose a notch during the month to the highest level since the outbreak of World War II.

Farmers are now getting higher prices for practically all commodities than a year ago; the gain in the average of all products combined since the outbreak of World War II is approximately 25 percent. The increase in prices paid for commodities and services (other than farm labor) used in production has been only 5 percent, but farm wages—an important item of cost—are the highest in more than 10 years.

The ratio of prices received to prices paid is approximately 20 percent higher now than in August 1939—the month immediately preceding the beginning of World War II. But this

ratio is still 10 percent below the 1910-14 average.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
May.....	98	123	80
June.....	95	123	77
July.....	95	122	78
August.....	96	122	79
September.....	97	122	80
October.....	99	122	81
November.....	99	122	81
December.....	101	123	82
1941			
January.....	104	123	85
February.....	103	123	84
March.....	103	124	83
April.....	110	124	89
May.....	112	125	90

¹ Ratio of prices received to prices paid. ² Revised

INCOME: Up

Higher commodity loans on basic commodities plus increased Government purchases of products under the the Food-for-Defense Program have raised the prospects for farm cash income above earlier expectations.

Income is rising seasonally now on current production; in addition, farmers have redeemed for sale at higher prices large quantities of 1940 cotton and wheat which had been pledged as collateral on Government loans.

Income figures available to date show that in the first 4 months of 1941 farmers received about 237 million dollars more from the marketing of products than in the like period last year. Income from livestock and livestock products was 300 million dollars more than in 1940, but income from crops was 63 million dollars less. Government payments also were smaller than in the first 4 months of 1940, the decrease totaling 77 million dollars.

Cash farm income is expected during the next few months to continue substantially higher than in the like period of last year. Income from fruits and vegetables probably will be larger, cotton is higher priced this year than last, wheat is higher priced and the new crop started to market earlier this year than last. Producers of livestock and livestock products will probably have the best income in several years.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	May average, 1910-14	May 1940	April 1941	May 1941	Parity price May 1941
Cotton, lb.....	12.4	12.7	9.79	10.45	11.68	16.12
Corn, bu.....	64.2	66.2	63.4	62.0	65.9	83.5
Wheat, bu.....	88.4	90.3	80.7	76.0	79.4	114.9
Hay, ton.....	11.87	12.28	8.32	8.10	7.98	15.43
Peanuts, lb.....	4.8	4.9	3.66	3.62	3.65	6.2
Potatoes, bu.....	69.7	69.5	83.5	57.6	53.4	*88.8
Oats, bu.....	39.9	41.5	36.6	35.2	34.0	61.9
Rice, bu.....	81.3	(?)	71.0	111.7	115.4	105.7
Tobacco:						
Fire-cured, types 21-24, lb.....	13.6	(?)	6.9	8.4	7.6	10.6
Cigar leaf, types 41-45, lb.....	14.1	(?)	8.0	9.0	6.7	11.0
Cigar binder, types 51-55, lb.....	19.9	(?)	14.0	14.3	13.6	15.5
Apples, bu.....	1.96	1.27	1.06	1.06	1.01	1.25
Beef cattle, cwt.....	5.21	5.50	7.51	8.60	8.52	6.77
Hogs, cwt.....	7.22	7.23	5.35	8.01	8.19	9.39
Chickens, lb.....	11.4	11.8	13.6	15.7	16.3	14.8
Eggs, doz.....	21.5	16.6	15.1	19.7	20.1	*22.7
Butterfat, lb.....	26.3	24.0	26.9	32.6	34.7	*32.9
Wool, lb.....	18.3	17.8	27.6	34.7	36.1	23.8
Veal calves, cwt.....	6.75	6.59	8.91	9.84	9.90	8.78
Lambs, cwt.....	5.87	6.46	8.25	9.09	9.05	7.63

¹ Revised. ² Post-war base. ³ Prices not available. ⁴ Adjusted for seasonality.

The following table shows income for April and totals for the first four months of 1941 with comparisons:

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
April:			
1941.....	670	39	709
1940.....	562	65	627
1939.....	478	90	568
1938.....	482	60	542
January-April:			
1941.....	2,497	279	2,776
1940.....	2,260	356	2,616
1939.....	2,059	282	2,341
1938.....	2,119	168	2,287

WHEAT: Harvest

Another winter wheat crop is being harvested—a crop that has been estimated at 698 million bushels, the fifth largest on record. Total supply of wheat for 1941-42—including winter wheat, spring wheat, and the 1941 carry-over—may be 1,295 million bushels. This compares with 1,099 million bushels for 1940-41. The total supply this year will be the largest on record.

Growers have voted in favor of marketing quotas on this year's crop, thereby assuring continuance of Government commodity loans. These loans are available to all producers—to cooperators in the allotment program at full loan rates, and to non-cooperators at 60 percent of the loan rates on their excess wheat. Marketing or feeding of wheat from acreages in excess of the allotments is subject to a penalty.

A Government analysis of the loan program during the marketing year now drawing to a close shows that during most of the year wheat prices were held at an average of about 25 cents per bushel above the level which normally would have prevailed under competitive supply and demand conditions. Legislation increasing the loan rate raised wheat prices in May to the highest level in a year. Through mid-May producers had redeemed

approximately 50 million bushels of wheat pledged as collateral for loans on the 1940 crop.

COTTON: Prices Up

Cotton prices, up sharply in response to Federal legislation providing for higher loans to growers, have been the best since the summer of 1937. Prices in spot-cotton markets averaged close to 13 cents in early June, as contrasted with less than 10 cents at the same time last year. The higher prices have resulted in the redemption by growers of about 2 million bales of cotton pledged as collateral on 1940 cotton loans.

Domestic cotton-mill consumption continues to make new high marks, but exports of cotton have shrunk practically to the vanishing point. No encouragement is offered by the turn of events abroad; even in Great Britain, the production of cotton goods is being restricted to war needs and a minimum of civilian requirements. Consumption in the United States will set a new high record this year, and there is a backlog of unfilled orders which will keep spindles going at a heavy rate well into next season.

United States exports of raw cotton totaled little more than 900 thousand bales during the first 9 months of the current season. Since exports may be even smaller next season, producers will be dependent almost entirely upon domestic consumption and Government loans plus conservation and parity payments.

CATTLE: Increase

An increase of about 5 percent is expected in total number of cattle and calves marketed for slaughter this year compared with last. Much of the increase will be in grain-fed cattle, but marketings of cows and heifers also may be a little larger this year than last. The extent to which total slaughter will exceed that of 1940 will depend largely upon producers' plans for holding back breeding stock.

Despite the prospective increase in cattle marketings this year, prices are expected to average higher than in 1940, as consumer demand for meats continues to improve. Prices of the better grades of slaughter cattle usually advance in late summer and fall, but the rise may be smaller this year than last on account of prospective large increase in marketings of fed cattle. Prices of the lower grades of slaughter cattle and of stocker and feeder cattle may weaken seasonally or hold about steady this summer and fall.

Government analysts look for a relatively high level of domestic demand for meats during the next year or two. They suggest a program of increased cattle marketings during this period. Should farmers continue to build up herds during the next 3 or 4 years, marketings of cattle and calves for slaughter at the end of that time will be exceptionally large and consumer demand may be less favorable than it is now.

HOGS: Higher

The pigs produced last fall are being marketed now, but the output was 13 percent smaller than in the fall of 1939, and marketings of hogs will be smaller this summer than last. Diminishing the total marketings also is the likelihood that shipments of packing sows will be substantially smaller this summer than last, since a marked increase is expected in the number of sows bred for farrow next fall.

The smaller marketings of hogs plus continued improvement in consumer demand and increased Government buying in the food-for-defense program spell higher hog prices. Hogs stood in favorable ratio to corn in mid-May, and it was considered as more than likely that this favorable relationship would be maintained during the remainder of the 1941 breeding season. This would point to a substantially larger pig crop in the spring of 1942 than in the spring of 1941.

Government purchases of pork and lard have been an important factor in

maintaining prices this season above the levels of the corresponding period a year earlier. Analysts noted that the rise in hog prices since March was more pronounced on heavy than on light hogs. Government purchases have been of the heavier weight cuts of pork products. Prices of 270-300-pound butcher hogs at Chicago were about 85 cents higher in early May than in March, whereas 180-200-pound hogs were only 60 cents higher.

LAMBS: Good Season

The early lamb season has been reported as one of the best ever experienced by producers. Early lambs have made good growth, and heavy marketings of these lambs and of yearlings from Texas are expected this month and next. Prices continue above those of a year ago, and above parity. The spread between market prices of shorn and woolled lambs was wider this spring than last, reflecting the higher level of wool prices.

Continued improvement in consumer demand for lamb and other meats is expected this summer, a factor that will offset at least in part the heavy volume of marketings. Prices probably will not decline as sharply this month and next as they did at the corresponding time last year. Moreover, the summer decline last year was much greater than the average for that time of year.

Farmers have been getting highest prices for wool in more than 10 years. Continuing support to domestic wool prices is seen in the prospect that mill consumption this year will be the largest on record to fill Army orders and civilian needs. Imports of wool are expected to decline this summer.

FATS, OILS: Up

A substantially higher average of prices of most fats and oils is forecast for this year compared with last. Strengthening factors include the increased buying power of consumers, a high level of building activity, and the

likelihood that imports of vegetable oilseeds and oils will be smaller during the remainder of this year as contrasted with 1940. (Supplies of most kinds of imported fats and oils are abundant in surplus-producing countries, but ocean shipping space has become increasingly scarce.)

Oilseeds prices also should average higher during the 1941-42 marketing season, even if the production of oilseeds is increased this year. Estimates on 1941 acreage of cotton will be available in July. Producers of other crops had reported they intended to plant 2 percent less flaxseed and 7 percent less soybeans this year than last. Intended acreage of peanuts was about the same this year as last.

The United States has enough flaxseed on hand to meet crushing requirements until the new domestic crop becomes available. Nevertheless, some flaxseed probably will be imported during the remainder of this year to meet the needs of eastern mills and part of the crushing requirements in the first half of 1942. United States imports during the first quarter of 1941 totaled nearly 4 million bushels, but it is expected that imports will not be maintained at this rate during coming months.

DAIRY: Records

Milk production reaches its annual peak this month—probably a higher peak than ever before. And after the turn of midyear when production declines it is expected that the flow will be larger than during the same period of 1940. More cows are on farms this year than last, feed is abundant, consumer demand is good, and price ratios are favorable to increased production of milk and manufactured dairy products.

Instead of the normal downward trend in fluid milk prices for May, the trend was toward higher prices for most of the markets reporting changes this year. An increasing demand for manufactured dairy products under the national defense program was

apparently taking the normal increase in fluid milk supplies at higher prices. A few markets, however, reported seasonally lower prices.

A good storage demand for dairy products has been forecast for this season, since 1940-41 was profitable to cold storage operators and consumer buying power is expected to continue at a high level this year and next. Cold storage stocks of butter on May 1 were almost double those of a year earlier, and stocks of cheese were about 40 percent larger than on that date last year. Wholesale prices of butter and cheese during the month were the highest for that period since 1929.

DRY BEANS: Increase

A program aimed at a 35-percent expansion in acreage planted this season to dry edible beans of the white varieties over the 1940 acreage has been announced by Secretary Wickard. Such an increase will be needed, it was stated, to assure adequate supplies and reserves to meet domestic commercial, school lunch, relief, and export requirements, as well as for shipments under the Lend-Lease Act and by the American Red Cross.

The Department of Agriculture intends to support the market for Pea and Medium White, Great Northern, and Small White beans. Purchases of new-crop beans will be made, insofar as practicable, from farmers cooperating in the AAA program. Operations will be directed at supporting the market on an Eastern seaboard basis at an average price level of approximately \$5 a hundredweight until about May 1, 1942.

Some variation in prices will be necessary to reflect differences in transportation rates from point of purchase which range from 20 cents to \$1 per hundredweight and to allow for differences in grade and supply and price situations which may develop. Continued purchases of both white and colored varieties of dry edible beans will be made as needed.

Growers who take part in this program and increase acreage of the desired varieties of white beans will not incur any deductions from their AAA payments because of so doing.

TRUCK CROPS: Higher

Harvesting of truck crops is moving rapidly north, and a good volume of output is expected for summer markets. Total marketings may be a little smaller than in 1940, but prices are higher since consumer buying power is unusually good and is expected to improve more during the remainder of the year. Larger acreages of truck crops for processing have been planted this year than last. Producers of vegetables usually get more than a third of their annual income during July, August, and September; this year the total should be larger than in 1940.

Production of new potatoes in the second section of early States has been indicated at 21 million bushels, or approximately 16 percent more than last year's output. Marketings of potatoes are increasing, but prices seem to be holding up well in response to a good consumer demand. Condition of the crop was reported last month as being above average in all States except Florida, North Carolina, and California.

FRUITS: Good Crops

Fairly large crops of nearly all important fruits are in prospect for this year. Production of peaches in the 10 early Southern States may be the largest since 1931, "good-sized" crops of apples are expected in most commercial sections of the country, a somewhat larger crop of dried prunes this year than last is expected in the Pacific Coast States, California apricots also are expected to be a much larger crop this year.

An average crop of Bartlett pears is expected in the Pacific Coast States

but production of late varieties probably will be relatively light . . . most varieties of California grapes are expected to produce crops of at least average size . . . indications in mid-May were that pears would be a good crop in eastern producing areas. The condition of citrus trees and bloom was reported as "generally favorable" in most areas as of May 1.

Farmers' cash income from fruits usually rises sharply in June. This year the markets should be especially good in view of the increased buying power of consumers and the various purchasing and diversion programs of the Federal Government.

POULTRY, EGGS: Higher

Production of eggs is declining seasonally now, but the total output is about the same as at this time last year and prices are higher in response to unusually good consumer demand. Meanwhile, there has been a marked increase in hatchings of chicks and there will likely be many more layers on farms next fall than last. This points to a sizable increase in production of eggs later in the year when consumer buying power may be even better than it is now.

Laying flocks have been smaller this spring than at corresponding dates last year, but the rate of lay has been unusually good. There were 10 percent more young chickens on farms this May 1 than last; indications in midmonth were that there was a high record hatch in May, and that there would be a large late hatch this year. Much of this is in response to the Government request that production of poultry and eggs be increased this year in connection with the Food-for-Defense Program.

Chickens are selling higher than at this time last year, a situation that is expected to continue even though supplies of poultry meat will be larger than during the last half of 1940.

FRANK GEORGE.

Commodity Loans in 1941

PLANs for 1941 commodity loan programs are being formulated by the Department of Agriculture. Congress has authorized loans on wheat, cotton, corn, tobacco, and rice to be made by the Commodity Credit Corporation at 85 percent of parity, this rate to apply only when marketing quotas have not been disapproved by producers.

Wheat: To wheat producers 85 percent of parity loans will mean an average loan of about 98 cents a bushel on the farm as compared with the 1940 loan of 64 cents at the farm. Allowances for handling and transportation costs will bring the loan values for basic grades of wheat at major terminals, if delivered there, to the following figures:

No. 2 Hard Winter:	Dollars per bushel
At Kansas City.....	1.10
At Omaha.....	1.09½
At Chicago.....	1.15
At Galveston.....	1.17
No. 2 Red Winter:	
At Chicago.....	1.15
At St. Louis.....	1.15
No. 1 Dark Northern Spring:	
At Minneapolis.....	1.15
No. 1 Soft White:	
At Portland.....	1.05

Since storage facilities in terminals and subterminals are expected to be burdened by the carry-over from the 1940 crop plus the large crop soon to come to market, the Commodity Credit Corporation is assisting farmers in the storage of loan wheat on farms. Prepayment of the usual storage allowance of 7 cents per bushel for farm storage of wheat is to be made when the producer provides new or additional storage space. Another change in the 1941 loan program sets April 30 as the maturity date for all loans, farm-stored as well as warehouse-stored.

Corn: Loans at 85 percent of parity would mean an average loan rate of 70 cents per bushel at present parity levels although the rate may vary by counties. For the 1940 crop eligible producers in the commercial corn area received loans of 61 cents per bushel regardless of location. The Department of Agriculture has announced that there will be no marketing quotas on the 1941 corn crop.

Cotton: At 85 percent of parity the average cotton loan will approximate 13.7 cents per pound gross weight based upon present parity. Since cotton prices have advanced on the prospect of higher loans, large quantities of cotton pledged as security for loans have been redeemed for sale at the higher prices. These redemptions of cotton have swelled "free" stocks and consequently increased the quantity of the 1941 crop that is likely to be placed under loan. It is possible that 1941 cotton pledged for loans will double the 1940 volume. Much of this cotton, of course, may be required for consumption before the end of the season and be redeemed, but a movement into the loan exceeding that in 1937 is possible.

Tobacco: Growers of flue-cured and burley tobaccos probably will receive 2 to 3 cents more a pound for their 1941 tobacco than for their 1940 crop, since the loan and purchase programs of the Commodity Credit Corporation will be geared to 85 percent of parity. For the 1940 crop growers of flue-cured and burley tobaccos received returns of about 72 percent of the revised parity standard. It is anticipated that loan and purchase arrangements with export tobacco companies similar to those of the past two seasons will be utilized to move the flue-cured crop.

Rice: To rice producers loans at 85 percent of parity means a floor of about 90 cents a bushel as compared with a 1940 season average price of about 70 cents a bushel, and a price of about \$1.15 a bushel on May 15, 1941.

Farmers Repay Crop Loans

FARMERS have redeemed substantial quantities of 1940 crops pledged to secure Commodity Credit Corporation loans. During March, April, and the first half of May they redeemed more than 1½ million bales of cotton and approximately 50 million bushels of wheat. These redemptions to an important degree resulted from the prospect for higher loans on 1941 crops.

Replacing export outlets now closed to our products, the loan and purchase programs of the Department of Agriculture have absorbed large quantities of surplus commodities that otherwise would have demoralized the domestic market. As a substitute for lost export markets, the loan programs have been needed most for cotton, flue-cured tobacco, raisins, dried prunes, and naval stores, since--on the average--two-fifths of these crops had been exported during recent years.

During the crop marketing season now coming to a close about two-thirds of the raisin production, one-half of the dried prunes, one-third of the flue-cured tobacco, and one-fourth of the cotton crop were placed under loan. One-third of the wheat production was pledged since supplies were much in excess of domestic requirements. Wheat in recent years has participated less in foreign markets than have other export crops.

WHEAT loans during the 1940-41 season were made on 278 million bushels as compared with 168 million bushels of the 1939 crop. It is estimated that approximately 180 million bushels of this wheat--the security for unpaid loans--will be turned over to the Corporation. It is probable that approximately 25 million bushels of farm-stored wheat will be rescaled. Although almost 50 million bushels of the wheat placed under loan was redeemed (and some further redemptions of farm-stored wheat is anticipated), the results of the 1940 program

differ sharply from last year's experience. Then, there was almost complete liquidation of loans aside from loans extended on 10 million bushels of farm-stored wheat. Since the total wheat carry-over will be only about 120 million bushels larger than last year's, the quantity of Government stocks indicates that holdings in private hands will be substantially smaller than a year ago.

(Wheat which is turned over to the Corporation is placed in a pool for sale at a later date. Any profits from such sales are to be prorated among producers participating in the pool.)

THE importance of cotton loans in supporting prices at the time of active marketing by producers is evidenced by a comparison of 1940 loans on 3.2 million bales with the average exports of 5 million bales during the 1934-38 period, and the prospective 1940-41 exports of 1 million bales. In Texas, where export markets are a major outlet, more than 1.6 million bales, or one-half of the cotton crop in that State, moved into loan; in California, also normally exporting a large proportion of its cotton, 385 thousand bales or three-fourths of the crop was pledged.

With the rise in cotton prices beginning in March, liquidation of loans became profitable to cotton growers. By mid-May redemptions had been reported on a total of more than 1.7 million bales of 1940 cotton; furthermore 225 thousand bales of 1938 loan cotton had been redeemed since March. In the eastern and middle areas of the Cotton Belt, where less than 15 percent of the 1940 crop was placed under loan, most of the pledged cotton has already been released. In Texas over 800 thousand bales had been redeemed by early May. Repayments of loans in California, however, have been at a much slower pace.

Summary of Cotton Loans

	Loans made	Quantity under loan May 17, 1941
	<i>Bales</i>	<i>Bales</i>
1940-41 crop.....	3, 158, 000	1, 437, 000
1939-40 crop.....	30, 000	15, 000
1938-39 crop.....	4, 482, 000	1, 749, 000
Previous crops.....	12, 254, 000	6, 126, 000
Total.....	19, 924, 000	9, 327, 000

1 Owned by Commodity Credit Corporation.

CORN loans by mid-May had been made on only 100 million bushels as compared with 300 million bushels a year ago. The quantities likely to come under loan are not so large as last year's because of the smaller 1940 corn harvest, the longer storage period required of producers, and some increase in demand for feeding purposes. Reserve supplies of corn on farms have been assured by the resealing program under which approximately 200 million bushels of 1938 and 1939 corn have been stored for one- and two-year periods. About 170 million bushels of 1938 and 1939 loan corn, not redeemed or resealed, were delivered to the Corporation in the latter half of 1940.

On April 30 the Corporation owned 125 million bushels of corn stored in steel bins, 34 million bushels stored in country elevators, and 63 million bushels in terminal and subterminal elevators. The corn stored at country points is available for sale at 65 cents a bushel, or at the local market price, whichever is higher. The corn located at terminals and subterminals is available for sale at somewhat higher prices. From February through mid-May, 25 million bushels of corn were sold and sales are continuing at a substantial rate. With more than 400 million bushels of old corn available for sale or redemption, and 100 million under 1940 loans, the Ever-Normal Granary Program now provides, at reasonable prices, the needed reserve feed supplies for the planned expansion in output of pork and other livestock products.

TOBACCO programs operated by the Corporation this season included loans and purchases for flue-cured, burley, and dark tobaccos. Almost 170 million pounds of flue-cured tobacco were bought for the account of the Corporation. The export tobacco companies, who acted as buying agents, have options to purchase this tobacco from the Corporation at cost plus accrued charges. Cooperative-marketing associations received loans on burley and dark tobacco, and tobacco export companies received loans on 35 million pounds of flue-cured tobacco and several million pounds of dark tobacco.

Plans are under way to transfer some of the 1939 flue-cured tobacco held by the Corporation to the British Government under the Lend-Lease Act. The amount to be taken may be determined in large part by the shipping space available for this type of cargo.

LOANS and purchases on 1940 crops through April 30 totaled 483 million dollars, as compared with 340 million dollars on 1939 crops. Advances on the basic crops, cotton, corn, wheat, and tobacco, accounted for 457 million dollars of the 1940 total. Besides these major programs, loans were made available to producers of

Summary of Loan and Purchase Programs on 1940 Crops (through April 30, 1941)

	Quantities pledged or purchased	Face amount of loan or purchase
	<i>Thousands of units</i>	<i>Millions of dollars</i>
Cotton, bales.....	3, 158	152.1
Corn, bushels.....	98, 322	59.9
Wheat, bushels.....	278, 353	200.8
Tobacco, pounds.....	235, 612	44.2
Prunes, tons.....	89	5.3
Raisins, tons.....	109	5.1
Turpentine and rosin:		
Turpentine, gallons.....	2, 998	} 6.7
Rosin, barrels.....	553	
Other crops.....		8.9
Total.....		483.0

barley, rye and grain sorghums and to cooperative associations marketing butter, peanuts, prunes, raisins, and gum naval stores. Loans to cooperative associations on 1940 crops amounted to 24 million dollars. On April 30, 1941, commodity loans held by the Corporation totaled 353 million dollars, and private lending agencies held an additional 226 million dollars subject to purchase by the Corporation. Some of these loans were on crops produced prior to 1940.

In addition to these loans, the Corporation on April 30, 1941, owned more than 6 million bales of cotton, 93 thousand tons of rubber received in the cotton-rubber barter with Great Britain, and 220 million bushels of corn. Furthermore, during May, the Commodity Credit Corporation was completing the pooling of some 180 million bushels of wheat securing unpaid 1940 loans.

C. C. FARRINGTON,
Commodity Credit Corporation.

Income of Typical Cotton Farms

DURING recent years many general and very sweeping statements have been made concerning the incomes of cotton farmers in the South. That such statements are likely to be misleading especially when applied to any particular section is evident from indices of net farm returns of cotton farmers in three separate areas of the South. Such statements are particularly misleading when the relative incomes are compared with the base period 1910-14. During the past 8 years, the index of net farm income of typical cotton farmers on family-sized farms in the Mississippi Delta has been considerably above 100 percent of the 1910-14 income, while that of the cotton farmers in the Black Waxy Prairie of Texas has been well below 100 percent. The index for typical 2-mule cotton farms in Georgia (largely representative of cotton in the lower Piedmont area) has barely reached 100 percent in 3 of the last 8 years. These wide differences among areas suggest that cotton farmers' problems have distinct area implications and are therefore not likely to be solved with any single formula.

The index of net farm income summarizes changes in farm organization such as size of farm; use of land; production of crops, livestock, and livestock products; and mechanization and other technological developments, to-

gether with shifts in prices. Net farm income as used here is the amount which the farm operator has during the year to compensate himself and unpaid members of his family for services rendered on the farm. Only interest actually paid on farm obligations is considered as expense. Crops on which loans were obtained but not redeemed were considered sold. The farms are considered as owner-operated, and the income is computed on a calendar-year basis.

EACH of the organizations is typical of cotton farms in the indicated section of the South, but each organization is different and the shifts made by the operators to meet changing economic conditions are significantly different.

The two-mule cotton farms in Georgia are typical of a large group of farms in the Old South, an area in which cotton farming has been established for some time. Cotton farming became prominent in the other areas considerably later, particularly in the Delta of Mississippi, and was well established in each of the areas by 1910. The Mississippi Delta is a comparatively new farming area, however, and considerable land was still being reclaimed and farm organizations were undergoing considerable change long after 1910.

Typical family-operated farms of the Delta in 1910 produced little but the one crop—cotton. Under this one-crop system it was necessary to ship in feed crops for the livestock—mostly work animals. This importing continued until after the Agricultural Adjustment Program was well under way in the area.

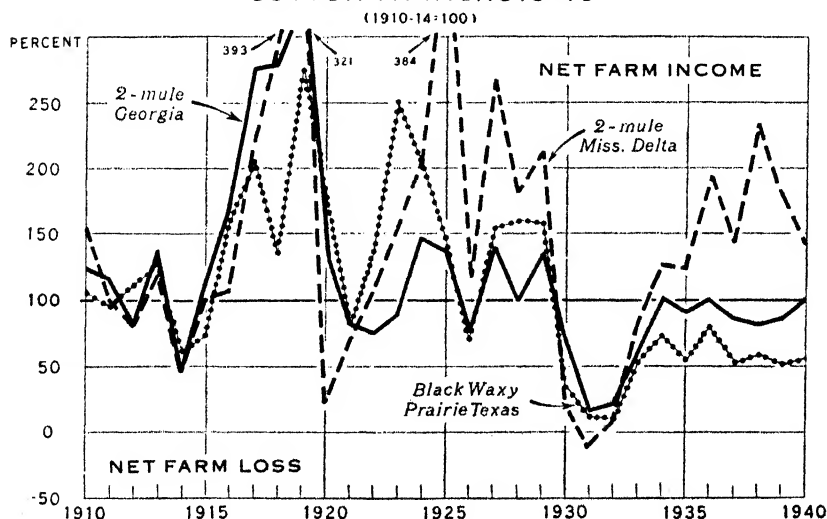
THE trend in the index of farm income has usually been more favorable to Delta cotton farmers. But excessive moisture conditions, with which boll weevil infestation is associated, are frequent in the Delta area. These factors, combined with a short corn crop in 1920, gave the Delta a lower index of farm income than the other areas in 1916 and 1920. The index of farm income was low for all areas in 1931 but was comparatively lower for the farmers in the Delta. In that year, Delta farmers had high yields of cotton which had to be harvested at costs which had fallen far less than had the price of cotton.

The acreage of cotton has been reduced drastically in each area under the adjustment program. Striking changes in farm organization have been made in each area. Each group

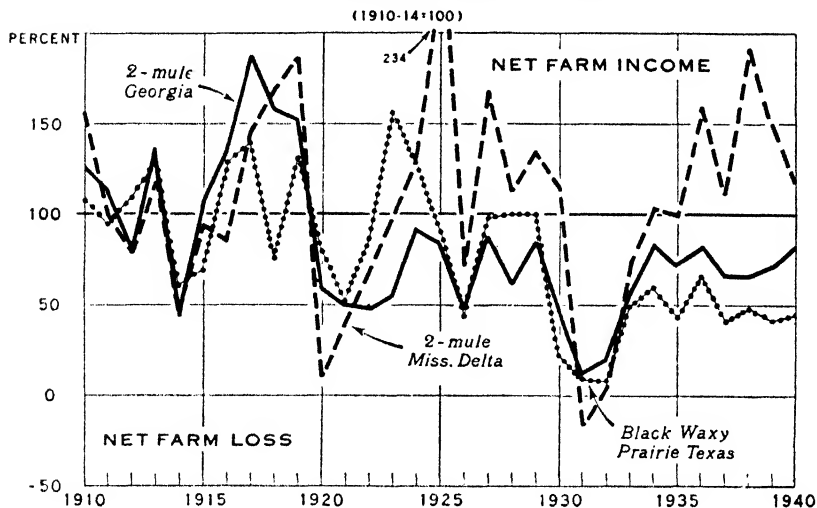
of farmers has increased acreages of corn, hay, and other feed crops, and each group has increased its livestock program. Georgia farmers have increased their livestock enterprises to the extent that feed crops are still utilized on the farm, whereas farmers in the Black Waxy area are selling more feed crops than formerly. Delta farmers are now producing enough whereas formerly, though their livestock programs were small, they were purchasing feeds. In 1938 this area had a slight excess of feeds, the only year in which this has happened.

THESE shifts and changes are reflected in the indices of net farm income. The index of net farm income for Delta farmers has been comparatively high since 1933, mostly because the farmers have been able to increase their production substantially without any material increase in costs. They are now producing 45 percent more cotton on 28 percent less acreage and are spending slightly less for fertilizer than during 1928–32. These farmers have almost doubled their cotton yields since the adjustment program started. Less than 5 percent of their total expenditures is for fertilizer.

INDICES OF NET FARM INCOME OF TYPICAL COTTON FARMS, 1910-40



INDICES OF PURCHASING POWER OF NET FARM INCOME OF TYPICAL COTTON FARMS, 1910-40



The index of farm income of Georgia farmers has generally been less favorable than for Delta farmers. This has been true particularly since 1933. These farmers are now producing the same quantity of cotton as they did during the period 1928-32, but they have reduced the acreage of cotton by 24 percent and are spending 17 percent less for fertilizer than in the period 1928-32. Even so, more than 32 percent of their total expenditures now is for fertilizer. In contrast, Black Waxy farmers have had the lowest index of net farm income in recent years. These farmers are now producing 20 percent less cotton on a third less land than during the period 1928-32. Farmers in the Black Waxy have never used commercial fertilizers extensively in cotton production.

The typical Black Waxy cotton farm in terms of acres cultivated is almost three times the size of the Delta farm and more than double the size of the Georgia farm. Since the early 1930's farmers in the Black Waxy area have mechanized their farms considerably. Approximately 30 percent of the total expenditures on these farms in 1937-39 was for machinery operation and replacement in contrast to an average of

12 percent from 1910 to 1932. Little mechanization has taken place on the Georgia or Delta farms.

Organization of Typical Cotton Farms, 1937-39

Item	Type of farm		
	2-mule, Georgia	2-mule, Mississippi Delta	Black Waxy Prairie, Texas
Acres in farm.....	81.9	40.9	101
Acres cultivated.....	39.2	30.2	87
Percentage of farm cultivated.....	47.9	73.8	86
Acres cotton.....	11.6	13.8	37.6
Yield of cotton, pounds lint.....	244	426	183
Acres corn.....	16.6	9.7	17.0
Acres other grains.....	10.3	2.8	8.1
Acres hay.....	1 (5.0)	2.3	9.4
Acres pasture.....	8.6	5.0	12.0
Workstock, head.....	2.0	2.0	3.7
Cattle, head.....	2.6	1.9	3.5
Hogs, head.....	4.0	5.0	5.1
Hens, number.....	40.0	45.0	60.0
Proportion of gross income from various sources			
Cotton and cottonseed..... Other crops..... Livestock..... Livestock products..... AAA.....	Percent	Percent	Percent
	59	79	64
	5	0	4
	6	3	4
	13	5	11
	17	13	17
Total.....	100	100	100

1 Double-cropped.

THE question arises as to what these incomes mean in terms of purchasing power to the farmer. Will the income this year buy as much of goods and services for family living as the income in 1910-14? (Expenditures for farm operations have already been accounted for in farm expenditures each year.) Prices farmers pay for commodities and services in family living are higher today than in 1910-14. Have farm incomes risen to the same extent? Indices of the purchasing power of net farm income are shown in the chart on page 13. The index of net farm income for each of the typical farm organizations has been adjusted by the index of prices farmers pay for commodities used in

family living—both indices based on 1910-14=100.

The purchasing power of net farm income for typical cotton farmers in Georgia hasn't reached 100 since 1919. The purchasing power of cotton farmers in the Black Waxy Prairie of Texas varied about the 100 level until about 1925. Since then, it has been below 70 in all but 3 years—1927, 1928, and 1929. Except for the depression and 1920—a year in which weevil damage was heavy—the index of purchasing power for Delta cotton farmers has generally been above 100. Since 1933 the purchasing power of these Delta farmers has averaged about 135.

WYLLIE D. GOODSSELL

WILLIAM D. BLACHLY.

Water Facilities Program Speeding Up

AFTER getting off to a relatively slow start in the fall of 1937 and the spring of 1938, the Department's Water Facilities Program is beginning to gather momentum. It is entirely possible that during 1941 more farmers and ranchers will take advantage of the assistance offered under the program than in all previous years of its operation.

Water facilities—especially small water facilities such as stock tanks, wells, windmills, water diversion systems, and small irrigation systems—are sorely needed in arid and semi-arid sections of the West. Farmers have been handicapped in obtaining them because in a great many instances they lacked either the technical knowledge necessary to proper water development or the funds with which to finance the facilities. Often they lacked both technical knowledge and funds.

FOLLOWING the droughts of the mid-30's, the report of the Great Plains Committee, and passage of the Water Facilities Act, the present

Water Facilities Program was undertaken by the Department of Agriculture. Congress has annually appropriated \$500,000 for administration of the program and the Farm Security Administration has made available rural rehabilitation funds to give further strength to the effort for water facilities development.

As everyone knows, water development in the West cannot be undertaken headlong. It is a complex, often delicate, business. So, in the early days, progress under the program was slow. Now, however, an increasing number of dry-land farmers are taking advantage of Government assistance in the development of water facilities on their lands. Latest reports show that more than 1,600 farm families will benefit from installations planned during the 8 months following July 1, 1940. This compares with about 2,400 families served by facilities planned during the previous two years.

UNDER the arrangements for administering the Water Facilities Act, the Department of Agriculture

utilizes three of its agencies which are particularly equipped to contribute to an effective service program. The Bureau of Agricultural Economics takes leadership in developing the broad plans for areas in which operations may be conducted. Once an area is approved for operations, farmers may apply either to the Farm Security Administration or to the Soil Conservation Service for the construction of ponds, wells, tanks, dams, or other water facilities. They may apply for single structures to serve individual farms, or they may apply in a group for structures or systems to be used by a number of neighboring farms or an entire community.

Generally, the Farm Security Administration lends the money for the construction of the facilities and the Soil Conservation Service plans the systems and designs the structural work. The farmers agree to pay back all they can of the cost of the facility, the principal and the term of the loan

being scaled according to the beneficiaries' ability to pay. They also agree to follow conservation farm plans and farm and home-management plans to be worked out with these agencies.

At present the Department has approved 148 areas, embracing 156,433,-960 acres of land, for operations under this program.

THE purpose of these water facilities is not reclamation—bringing new land into cultivation. Instead, they are intended to furnish ample and dependable supplies of water, at locations where they can be advantageously used, to farmers who suffer from insufficient or uncertain water supplies. The program provides for the improvement and rehabilitation of old systems and structures as well as for building new ones. Stock watering facilities built or improved to date include ponds, wells, power pumps, windmill pumps, springs, and tanks. Irrigation works for serving 123,543 acres, include dams, wells, pumps, and distribution systems. Several hundred water spreading systems have been installed, and a number of underground reservoir recharging systems are under way.

It is estimated that the total direct cost of the 6,036 facilities planned to date will be \$2,096,050. Of this total cost, the direct and immediate contribution of farmers in terms of labor, equipment, supplies, and so on represents approximately 27.5 percent. About 12.6 percent of the cost will be absorbed by the Government. The remainder, 59.9 percent, is financed by Government loan, to be repaid by the farmer at a low rate of interest over an extended period of time.

GEORGE PHILLIPS,
Chairman, Water Facilities Board.

Present Status of the Water Facilities Program by States:

	Fa- cili- ties	Acres under con- ser- vation farm plans	Fam- ilies ben- e- fited	Total direct cost ¹
Arizona.....	56	21,476	31	\$47,219
California.....	186	17,845	82	130,416
Colorado.....	114	187,712	210	148,544
Idaho.....	158	59,776	441	272,719
Kansas.....	575	154,194	220	111,333
Montana.....	31	55,296	25	33,350
Nebraska.....	163	131,384	93	98,606
Nevada.....	11	1,362	6	7,045
New Mexico.....	374	159,306	625	205,723
North Dakota.....	68	17,207	30	14,762
Oklahoma.....	790	120,964	295	166,333
Oregon.....	69	18,448	155	105,114
South Dakota.....	211	280,926	91	27,468
Texas.....	2,761	664,102	920	368,516
Utah.....	77	26,075	506	173,154
Washington.....	93	11,566	48	58,194
Wyoming.....	299	312,792	251	127,554
Total.....	6,036	2,240,431	4,029	2,096,050

¹ Includes farmers' contributions, Federal grants and loans to be repaid by farmers.

Farm Products: Producer to Consumer

III Transportation

COSTS of transportation are an important part of total marketing costs. A recent estimate shows that the charges for transporting farm food products during 1940 totaled 800 million dollars. This amounts to 9 percent of the total costs of marketing these commodities. While this figure may not seem large on the average, for some products the ratio is much higher. Certain products, especially some fruits and vegetables, are shipped long distances; consequently, the hauling charges are relatively substantial. Watermelons are an extreme case—in New York in July 1936, transportation, including city cartage, took 59 cents of the consumer's retail dollar.

In spite of the increasing importance of other modes of transportation, the railroads still probably handle the predominant portion of the intercity movement of farm products. Consequently, the relatively high and increasing level of rail rates has been of major concern to farmers, particularly those located far from their markets. In addition to their opposition to further increases in rates on agricultural commodities, farmers have renewed their demand for a rationalization of the rate structure with a view to distributing more justly the cost of railroad transportation service among its users.

Farmers are also pressing for a more fundamental treatment of the transportation situation. They are insisting upon the elimination of costly and wasteful practices, the scaling down of excessive capitalization and fixed charges and, in general, the introduction of greater efficiency and economy in railroad management. The attainment of greater efficiency by these methods will enable the carriers to reduce the level or rates without sacrificing necessary transportation service.

PROBABLY the most fruitful attempt of farmers to obtain lower priced and more flexible transportation services has been the utilization of agencies of transport other than railroads. This method became of material importance after 1920 with the revival of water carriage and especially the development of highway motor transport.

The principal service advantages of using trucks are that they are better adapted to handling small shipments; they can pick up commodities directly on the farm; they can be started on the trip at almost any time; they are more flexible since they need no special right-of-way; they are usually faster than railroads for the short hauls; and they often involve less handling of the products and, consequently, less likelihood of damage on this score. These advantages in service are apparently coupled in many cases with advantages in costs.

Although accurate comprehensive data on the respective costs of hauling a representative group of farm products under comparable circumstances by motor truck and by railroad are not available, it is generally conceded that shipment by truck costs less than by rail for short distances.

FARMERS have diverted a large portion of their traffic to motor and water carriers. About a million motor trucks are now operated by farmers who have discovered the advantages of using this flexible means of transport under their own control. In addition, much agricultural traffic now goes to market by means of common and contract motor carriers, as well as by trucks owned by dealers in farm products, although it is impossible to estimate at this time the proportion of the total made up by such traffic.

It is well known, however, that the

railroads have lost to motortrucks significant portions of the traffic in fat livestock—especially hogs, cattle and calves—as well as in cotton, most fruits and vegetables, milk, butter, poultry and eggs, baled hay and straw, sugar beets, and other farm products. This ability to shift traffic to other agencies of transport, especially to motortrucks, has made it possible for farmers not only to reduce their transport costs and to obtain improved services for the traffic actually shifted, but also to stimulate the rail carriers to make some adjustments in rates and improvement in services for traffic remaining on the rails.

THE post-war rise of motor and water transportation was soon followed by demands that all such for-hire carriers be regulated in the same way as railways, particularly with respect to minimum rates and entry into service. The proponents of such regulation stressed the argument that unregulated competition was destructive and that fair and equal regulation of all agencies of transportation was needed in order to preserve the inherent advantages of each. These demands were to a large extent successful and resulted in the passage of the Motor Carrier Act, 1935, and the Transportation Act of 1940, the latter providing for the regulation of domestic common and contract water carriers.

These laws reflect a drastic departure from the public policy which had prevailed, at least until 1920 for railroads, and, until more recently, for motor and water carriers. The basic proposals of regulation as originally embodied in the Granger legislation of the 1870's and the Act to Regulate Commerce in 1887 were to protect the public against exorbitant rates, unjust discrimination and undue preferences. With respect to railroads the traditional policy was greatly changed by the passage of the Transportation Act of 1920 in which the public undertook for the first time to assume considerable responsibility for the financial well-being of the carriers.

This attitude explains the endeavors made to restrict competition among railways. Similar public policies were adopted with respect to motor carrier competition in 1935 and to water carrier competition in 1940.

SOME farmers have questioned the advisability of uniform regulation of all for-hire forms of transportation and of applying to their operations such restrictive devices as minimum rate control and certificates and permits, since this would prevent competition and would perpetuate the high level of rates. It was perhaps the opposition of farmers that induced Congress to insert in the Motor Carrier Act several exemptions of special interest to agriculture. One of the important operations thus exempt from all portions of the law, except those relating to safety, relates to vehicles hauling for hire only unmanufactured agricultural commodities, livestock, and fish.

The Interstate Commerce Commission recognized that the policy reflected in this exception was "in accord with the general policy of the Government to favor and promote the interests of agriculture. The problem confronting Congress at the time of the adoption of the exemption was, on the one hand, to relieve transportation of the essential products of agriculture from some of the incidents of regulation but, on the other, to preserve the general purpose of the necessary regulation of transportation by motor vehicle."¹

There is little doubt that this exemption has been of material help to farmers, as well as to consumers, by resulting in lower rates on farm products than would otherwise be in effect. It is believed, however, that the exemption has not been quite as beneficial as some of its proponents may have hoped. For one thing, many agricultural carriers have had to give up back hauls of farm supplies (which are not unmanufactured farm

¹ *Monroe Common Carrier Application*, 8 M. C. C. 183 (185).

products, livestock, or fish) in order to be exempt and to operate empty on the return movement. This means that all of the trucking expenses must be borne by the main haul. Since the cost of a round trip is approximately the same whether or not there is any pay load on the back haul, the expenses per unit of traffic on the principal movement would be approximately twice as high as if there were a return

movement. Of course, the rates on the main haul of farm products must reflect the high per unit costs. Extension of the exemption to cover vehicles hauling farm products from agricultural areas to market and farm supplies on the back haul would doubtless lead to lower rates on both types of traffic.

EZEKIEL LIMMER.

Processing and storage of farm products will be discussed next month.

Servicing A Billion-Dollar Industry

THE market news service on fruits and vegetables, operated by the United States Department of Agriculture, functions somewhat like a commercial press association. More than 8,000 miles of leased telegraph lines link together the Department's market news offices in 22 large terminal markets the country over and the temporary offices operated at some time during the year in 45 major producing areas. Up-to-the-minute and summary market news reports—by mail, wire, press, and radio—cover more than 50 different fruits and vegetables. Combined, these reports give a daily, moving picture of conditions in the Nation's vast fruits and vegetables industry.

Farmers and shippers in producing sections rely upon the 22 city offices for information on prices, conditions, and supplies at terminal markets—information collected by Government reporters interviewing buyers and sellers early each morning. Reporters check and recheck the prices at which the various fruits and vegetables are sold, and, in many cases the prices on each variety. Circulating about the markets they report on the general "tone" of conditions—"market dull," "market steady," "market firm."

While reporters are out on the street, clerks telephone the various railroad receivers for a record of supplies re-

Market reporters in scores of farm and city produce markets the country over * * * collecting and disseminating authentic information on prices, shipments, and market supplies * * * by mail, wire, press, and radio * * * a Government service to a billion-dollar industry in the production of fruits and vegetables.

Miles of leased telegraph lines link together the Government market news offices in receiving markets and producing areas * * * each office sends out daily reports on local conditions and a summary of conditions at other markets and producing areas * * * recently, a consumer radio market news service was added.

The accompanying article tells how producers, distributors, and consumers keep informed on the produce markets.—Ed.

ceived during the previous 24 hours. Clerks tabulate the reports coming over the leased wire from other city markets and from producing sections, and a report on carlot shipments and "passings" for the past 24 hours from Washington, D. C. The market news office is a busy place, speed is of the essence.

SPEED is essential too in disseminating the information. Radio is used. More than 400 radio stations now regularly broadcast agricultural market

news reports. A number of stations supply remote control facilities direct to the market news office. Some stations broadcast 3 to 5 scheduled reports daily so that producers may be kept informed on changes and trends in the market. Newspapers and other publications print the reports. Thousands of mimeographed copies are mailed to individuals direct.

The reports issued by the temporary offices in producing sections are similar to the terminal market reports, though they include only those commodities being shipped locally. A report that covers strawberries, for example, includes a summary of the carloads moved from the local area during the preceding 24 hours up to midnight, a résumé of local market prices, as well as prices of strawberries at terminal markets to which local strawberries are moving that day.

As in the cities, the radio is used to broadcast shipping point market reports. At Presque Isle, Maine, for example, the market reporter in charge of the local office broadcasts a summary of the potato situation every evening. His program, a complete discussion of the latest developments in potato marketing, is a popular radio feature. Shipping point market reports are also mailed to an extensive list of individuals, and reprinted widely in local newspapers.

The work of the temporary field offices is handled by reporters who move from one producing area to another as the season progresses and as shipments in one area cease and the movement from a later area begins. A reporter may be in charge of an office that reports on early potatoes; when the "deal" is finished, he may move successively to areas producing tomatoes, peaches, cantaloups. Some of the shipping point offices are open only a month, others may be maintained for as long as 9 months.

THE concentration of commercial fruit and vegetable production in fairly well-defined areas and the heavy volume marketed within a

relatively short period are factors that make shipping point market news reporting feasible. Each of these heavy-producing areas has a principal shipping point, and the market reporter at that point keeps his finger on the pulse of the deal from start to finish.

The value of market news reports issued at shipping points lies in the fact that they reflect prices being paid for the producer's product at the producer's market, thus giving the producer an opportunity to plan his marketing operations. If he thinks that prices will go a little higher than the quotations in the report, and if the condition of his crop permits, he may delay harvest a while. If he thinks prices are about due for a decline, he may step up harvesting.

In many fruit and vegetable areas nowadays, a considerable volume of produce is sold to itinerant truckers. In transactions of this sort, the shipping point market news report is especially valuable to producers. When the Virginia potato grower, for example, is asked by a trucker to name his price, the grower may reply: "The market news report says potatoes are selling for \$1.50 over at Onley. I guess I ought to get at least \$1.40."

PRODUCERS as a rule are not directly interested in prices paid at terminal markets. Such quotations include transportation costs and various commission rates, and it is difficult for growers to interpret these prices in terms of their own crops. But local shippers are keenly interested in city prices; shippers' quotations to growers are generally based on the situation at the receiving centers. An accurate appraisal of the demand at various markets also plays a part in the efficient marketing of the products.

Example: If the daily strawberry report issued at Hammond, La., during the shipping season shows strawberry prices at Chicago are \$4.50 a crate with only 2 cars on track, the shipper may find it advantageous to send his berries to that market rather

than to Cleveland where the price may be only \$4.25 a crate with 7 cars on track. If his berries are already on the way to Cleveland, he may "divert" them to Chicago. Such use of the markets news reports prevents the accumulation of a surplus at Cleveland by diverting supplies to Chicago where they are needed more. And whether or not the producer is interested in terminal market prices, the increased marketing efficiency that grows out of the availability of this information means money to him.

THE Department has been putting increased emphasis on the "consumer broadcasts" presented in a number of cities. These programs, identified by the name "Federal Food Reporter," keep the homemaker informed

of products that are plentiful on the market and relatively cheap in price, of the first offerings of the season, and final offerings. It is also planned to include with the broadcasts a discussion of food values. Consumer market news is now being broadcast in Boston, New York, Philadelphia, Baltimore, Cleveland, Cincinnati, Atlanta, Chicago, Kansas City, Oklahoma City, Denver, and Los Angeles.

The market news service on fruits and vegetables is not perfect. Many problems of news collection and news dissemination remain to be solved. Nevertheless, each year sees progress made and an increase in the number of people—growers, distributors, and consumers—who use the service in their business and in the home.

B. C. BOREE,
Agricultural Marketing Service.

Another Look at Land Values

A CONTINUED cautious response to improved income levels characterized the movement of farm real-estate values during the past year. An increase of 1 point in the index of values for the Nation as a whole brought average values to a level on March 1, 1941, that was 86 percent of the 1912-14 period. This marked the second consecutive year for which a 1-point increase over the preceding year was reported. Two major geographic divisions—the West North Central States and the West South Central States—showed no change in farm real-estate values during the past year. Increases in the other geographic divisions varied from 1 to approximately 3 percent, the largest increases occurring in the South Atlantic and East South Central groups of States. Average farm land values increased in 33 States, decreased in 6, and were unchanged in 9.

Values for the Nation as a whole are about 18 percent above the levels

Eighteen months ago, *The Agricultural Situation* explored the possibilities of a rise in farm land values. Caution was sounded against the sort of thing that happened after World War I, when land values were bid up to fantastic heights. In the collapse which followed that speculative spree, hundreds of thousands of persons were stripped of all their possessions.

* * * Once again we look at the situation and marshal additional reasons why land values should not be permitted to rise unduly in these uncertain times. Farm income this year will probably be the highest in more than a decade, but the big question is how long this increase will be maintained in the years to come. Against this uncertainty the Government economists advise a cautious response in land values.—Ed.

reported in 1933 when the value index reached a low of 73. In contrast with

the limited value increases since the depression low, cash income from farm marketings has increased more than 78 percent; with government payments included, the increase in income was approximately 95 percent. During the past 5 years the average value per acre of farm real estate has fluctuated little, the reported index being 85 in each of 3 years, 84 in 1939, and 86 for the year just past.

Factors operating during the past year to support land-value increases included the strengthening of prices of certain farm products in response to increased demands created by the National Defense Program. To the extent that the increased demands are expected to be of a temporary nature the response of land values to increased prices and incomes is likely to be limited. The attitude of prospective buyers toward the increased price and income levels will thus be of considerable significance in judging land values.

THE movement of values during the years just prior to 1920 is still remembered by a considerable number of people, and many prospective buyers may expect values to repeat, at least in part, their World War movement. Although it is probable that a substantial number of farmers expect land values to again rise and then fall, this very expectation will tend to have a curbing influence on value increases. As long as farmers are aware of the decline phase of the movement, there is less likelihood that values will be bid up unduly. Only persons interested in speculation, or in purchase for sale at the peak, would be interested in the upward phase of the movement. Those interested in long-term investments or in purchase for operation would drop out of the market before values reached a level that they felt could not be maintained.

While many farms during the last war probably sold at prices that bore little or no relation to current earnings, the basic difficulty seems to have centered around the failure to ap-

preciate fully the abnormality of the prevailing income and price levels and the unlikelihood of their continuance. While it is probable that many farmers are looking forward to significantly increased returns during the next few years, considerable uncertainty exists with regard to the permanent continuation of this improved income level. The question then is "What land value response is economically justified by these increased incomes which are expected to be temporary?"

THE relation of temporary price and income increases to land values may be illustrated by an example: If the expected level of annual net earnings of a given farm were estimated at \$5 per acre, a value of \$100 per acre would be warranted if a 5-percent discount rate was considered appropriate. If a further assumption be made that there will be an increase of \$2.50 per acre in annual net land earnings during the next 3 years, the warranted increase in land values would be the discounted value of the added net incomes. The land then would be worth \$106.81 per acre, or an increase of less than 7 percent as the result of an increase in income of 50 percent for a 3-year period.

This relatively small increase in values may be contrasted with a value of \$150 per acre if the increase in net income were considered permanent rather than temporary. Under the assumption that the 50-percent increase in net land income should continue for 5 years, the warranted increase in land values would approximate 11 percent. The larger the increases in incomes and the longer the increases may be expected to prevail the more significant could be their effect on present farm real estate values. The certainty of occurrence of the increased incomes and the rate of discount are also of consequence in attempting to judge the justifiable response.

The following tabulation shows the warranted increase in land values un-

der various conditions assuming a 5-percent rate of discount.

Increase in net land income above expected long-term average	Warranted increase in land values with income increases continuing for periods indicated	
	3 years	5 years
<i>Percent</i>	<i>Percent</i>	<i>Percent</i>
25	4.4	5.4
50	6.8	10.8
75	10.2	16.2

So long as the long-term considerations are properly emphasized in the formulation of judgments concerning land values, there is little danger that temporary price changes will influence values unduly. The cautious value responses in recent years would appear to indicate that the basic considerations are still being adequately weighted in the formulation of current value judgments.

A. R. JOHNSON.

National Research Center

THE Research Center of the United States Department of Agriculture, at Beltsville, Md., is probably the world's largest and most comprehensive institution devoted to the scientific solution of farm problems. The Center covers more than 12,461 acres. It contains laboratories, greenhouses, experimental plots, and other facilities for every conceivable agricultural research activity, beginning with the techniques of production and ending with the processing and utilization of consumer goods.

The Center contains thousands of experimental farm and laboratory animals. The experimental dairy herd is mostly Holstein-Friesian, with some Jersey, some Guernsey, and some Red Danish cattle. Other experimental animals include beef and dual-purpose cattle, horses, sheep, goats, swine, and dogs. Experimental flocks include chickens, turkeys, and pigeons. Eighty-four barns and 500 other structures—small-animal houses, pens, and poultry houses—shelter the experimental animals and fowls.

There are 31 greenhouses for experimental plants and insects. There is an apiary for bees. The Center has an abattoir, a granary, mechanical shops, and a central sewage-disposal plant. There are experimental pastures, ranges, orchards, fields of cultivated crops, timber stands, and soil-

treatment plots. There are 28 laboratory buildings. The cost of research at the Center is less than 2 million dollars a year. A small part of this is offset by the sale of surplus products.

THE Center employs nearly a thousand people. The scientific staff includes agronomists and animal husbandmen, apiculturists and bacteriologists, biochemists and biologists, botanists and chemists, entomologists and geneticists, grain technicians and home economists, horticulturists and marketing specialists, parasitologists and pathologists, physicists and physiologists, pomologists and silviculturists, and so on through the agricultural sciences from soil conservation to zoology.

Plant breeders at Beltsville develop new varieties of fruits, vegetables, and nuts to meet the Nation's rapidly changing requirements. One important requirement is resistance to diseases that from time to time threaten to wipe out a whole industry in some part of the country. Others are for properties that make for better eating quality and for good keeping and good shipping. Still another is for adaptation to a specific purpose, such as canning or preserving. Among the more notable contributions by Beltsville scientists in this field are the Marglobe tomato, created just in time

to save the Florida shipping industry from virtual extinction through ravages of wilt and rust, and the Blake-more strawberry, the most extensively grown strawberry variety in the United States.

The animal genetics work at Beltsville is designed to uncover new principles of farm animal improvement by systems of mating and to test the soundness of old theories. Among the relatively new theories proved by results at Beltsville is that the sire is more important than the dam in building up a high producing dairy herd. Records of the production of cows in the Beltsville dairy herd, kept for 22 years, show that a bull whose daughters are consistently better milk producers than their mothers is relatively pure in his genetic make-up for the factors that insure high levels of milk production.

BELTSVILLE animal breeders create new styles in swine to meet modern demands for medium-size hogs that gain as economically as larger hogs and produce the medium-size cuts of meat favored by today's markets. They breed types designed to butcher well both for lean hams and loins and for a good proportion of bacon. Progress has been made in developing more profitable sheep, goats, horses, and beef and dual-purpose cattle. Among the new creations is a fur-bearing sheep, the result of crossing Karakuls imported from Asia with various American breeds.

Following the "three-P" program—production records, pedigrees, and progeny testing—poultry breeders at Beltsville have developed some promising new lines of poultry. The pullets of one new line lay exceptionally heavy eggs. Those of another new line lay eggs having a high percentage of thick white—nice for poaching. Still another new line is a small-type turkey, with plenty of breast meat.

Side by side with the breeding research go a vast number of studies designed to bring to light facts that will point the way to better methods

of raising and caring for all these new crops—both plant and animal—of keeping them free from disease, infections, and infestations, of getting them to market most effectively and efficiently, and of finding new uses for them.

MOST of the Department's basic research designed to provide background information for the official inspection of grains and rice is conducted at Beltsville. In specially equipped laboratories, samples of grain taken from commerce are put through mechanical, chemical, and milling and baking tests. The results of these tests are used to improve official standards to meet changing conditions, as well as to make possible improved methods of evaluation, which can be translated into terms of practical inspection service.

Tests necessary under the Federal Seed Act are conducted at Beltsville. Hundreds of samples of seed taken from interstate channels of trade are examined to ensure compliance with the law, which requires complete and truthful labeling of seed shipped in interstate commerce for seeding and prohibits false advertising.

HOME economists at Beltsville look for ways to use agricultural products that will most benefit consumers. Food utilization research often provides a link between other lines of the Department's research and the ultimate consumer. It proves the fitness, or unfitness, of new animal or plant types for the market. It affords farmers a guide in growing the kinds of food consumers want to buy. The subject of adequate diets for human beings receives special attention. At the request of Congress, textile specialists look for new ways to promote the use of the abundant cotton crop. Designs for cotton hose developed by these specialists have been accepted by manufacturers of socks and stockings.

KATHERINE A. SMITH,
Office of Information.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	(1910-14=100)					Taxes ⁶
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in ⁵			Farm wages	
					Living	Pro-duction	Living and production		
1925	91	98	101	151	164	147	157	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	158	147	153	180	281
1930	91	88	96	126	148	140	145	167	277
1931	75	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	75	96	109	108	109	85	187
1934	75	61	77	109	122	125	123	95	178
1935	87	69	79	117	124	126	125	103	180
1936	103	80	80	118	122	126	124	111	182
1937	113	94	83	126	128	135	130	126	187
1938	88	73	81	115	122	124	122	125	186
1939	108	84	80	113	120	122	121	123	190
1940	122	95	81	115	121	124	123	126	
1940—May	115	88	81	114			123		
June	121	90	81	113	121	125	123		
July	121	93	81	113			122	129	
August	121	96	81	113			122		
September	125	99	81	114	121	123	122		
October	129	101	81	115			122	129	
November	132	104	81	116			122		
December	138	108	81	117	122	125	123		
1941—January	139	111	81	118			123	124	
February	141	111	81	118			123		
March	143	113	82	119	124	125	124		
April	139	112	82	121			124	138	
May ⁷				124			125		

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	149	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	153	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1940	85	81	79	114	108	113	96	98	80
1940—May	92	83	88	117	108	106	84	98	80
June	83	81	104	112	102	104	81	95	77
July	78	80	89	98	110	105	88	95	78
August	76	77	79	107	110	109	90	96	79
September	77	76	73	114	114	111	104	97	80
October	80	78	79	99	112	116	112	99	81
November	83	79	71	98	112	121	120	99	81
December	81	79	75	93	111	128	122	101	82
1941—January	84	80	78	117	130	121	100	104	85
February	81	80	80	156	130	118	90	103	84
March	84	82	83	134	129	118	90	103	83
April	90	88	89	161	137	121	104	110	89
May	93	98	89	146	138	124	107	112	90

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation. Revised April 1941.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

Note.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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A Brief Summary of Economic Conditions

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INCREASED INDUSTRIAL PRODUCTION and the largest national income in our history are providing good domestic markets for farm products. Prices of farm products have advanced, but many products continue to stand lower in purchasing power than in the 1910-14 period of parity. Farm income in the first half of 1941 was the largest in more than a decade, but total for the full year will be about 9 percent of the national income. Farm income in 1929 was 10 percent of the national income. The comparable figure for 1910-14, allowing for the greater increase in city than in farm population, is about 12 percent. * * * The 1941 season began with production prospects unusually bright, then drought intervened to cause anxiety for crop prospects in the east, subsequent rains repaired much of the damage. Unless bad weather should prevent, the outturn of crops and livestock products may be the largest on record. There should be plenty of food for us and for Britain. * * * Markets are being aided by the unusually good domestic demand and by Government purchases of foods for relief distribution and for export. Nevertheless, it is likely that prices will advance less in the last half of the year than the advance in the first half.

Commodity Reviews

DEMAND: Higher

THE sharp rise in prices of farm products since March is evidence of the marked improvement in demand which has occurred in recent months. This has been due to several factors: (1) Increasing employment and consumer purchasing power accompanying the faster tempo of industrial activity as the defense program expands; (2) Government purchases of foodstuffs under the food-for-defense program; (3) price adjustments to the higher Government loan rates which will apply to 1941 crops; (4) higher prices for some imported commodities, especially fats and oils, which compete with domestic products; (5) generally strong storage and speculative demand for products such as butter and eggs based on the prospects for continued improvement in consumer demand, continued Government buying and support for prices of commodities affected by the food-for-defense program, and generally rising commodity prices.

The effects of some of these favorable factors in the demand situation of the immediate past will be somewhat different in the future. To the extent that storage demand results in a decrease in immediate consumption and larger supplies next winter, for example, a part of the effects of future improvement in consumer purchasing power is being transferred to the present. Likewise, the effects of higher Government loan rates to apply in the next marketing season already have been discounted to a considerable extent in the markets for the affected commodities. Moreover, it becomes progressively more difficult to obtain additional increases in industrial production as the new plants under construction during the past year finally come into operation and previously idle facilities are utilized more nearly to capacity. From now on, increases

in the output of defense equipment will to an increasing extent be at the expense of the production of goods for consumers, and thus not represent an equivalent net increase in total industrial activity. For these reasons, the anticipated further improvement in demand conditions during the remainder of the year may not be as rapid or marked as in recent months.

F. L. THOMSEN.

LEASE-LEND: Allocations

President Roosevelt reported to Congress last month that 55 million dollars of Lease-Lend funds had been allocated up to May 31 for agricultural products. All but 3 million dollars of this sum was for foodstuffs. Allocations for dairy products and eggs totaled 31.7 million dollars; meat, fish, and fowl, 6.1 million; fruits, vegetables, and nuts, 6.0 million; grain and cereal products, 3.1 million; lard, fats, and oils, 3.6 million; and other foodstuffs, 1.5 million dollars.

Export prospects for these commodities have improved to the extent of the Lease-Lend allotments, but no marked increases in exports are in sight for cotton, wheat, fresh fruits, and most other commodities ordinarily exported in large volume. Some increase is expected in exports of tobacco, although the ocean transport situation makes doubtful a return to the pre-war export volume. Total of exports of all agricultural commodities combined is far below pre-war volume.

PRICES: Up

Purchasing power of farm products continues below pre-war parity, despite the sharp rise in prices received by farmers in recent months. Reason is that the prices paid out by farmers for the things they buy average 26 percent above pre-war, whereas prices received by farmers average only 18

percent higher than during the 1910-14 base period.

Including wages paid to hired labor, the purchasing power of farm products is even less than the 94 percent shown in the accompanying table, since the index of farm wages is 38 percent higher than the 1910-14 level. This

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
June	95	123	77
July	95	122	78
August	96	122	79
September	97	122	80
October	99	122	81
November	99	122	81
December	101	123	82
1941			
January	104	123	85
February	103	123	84
March	103	124	83
April	110	124	89
May	112	125	90
June	118	126	94

¹ Ratio of prices received to prices paid.

was the highest purchasing power figure (excluding wages) since the year 1929.

Best gains in prices received by farmers in recent months have been in cotton, wheat, hogs, poultry, eggs, truck crops, and fruits. Improving economic conditions will continue to give an upward lift to prices of farm products in general, although the gains during the last half of the year will likely be less than during the first half

INCOME: Rise

Farmers this year will receive the largest cash income since 1929. Total from marketings and Government payments has been estimated at 10.7 billion dollars. This compares with 9.1 billion in 1940, with 8.6 billion in 1939, and 11.2 billion in 1929. The larger income this year than last is attributable to higher prices and to prospects for a larger volume of marketings. Of the total, Government payments will be about the same as in 1940—about 700 million dollars.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	June average, 1910-14	June 1940	May 1941	June 1941	Parity price June 1941
Cotton, lb	12.4	12.7	9.54	11.68	12.81	16.12
Corn, bu	64.2	68.4	63.5	65.9	68.3	83.5
Wheat, bu	88.4	89.0	67.4	79.4	83.1	114.9
Hay, ton	11.87	12.16	7.71	7.98	7.82	15.43
Potatoes, bu. ¹	60.7	71.8	85.7	53.4	64.6	89.9
Ons, bu	39.9	41.8	32.7	34.0	33.3	51.9
Rice, bu	81.3	(²)	72.6	115.4	113.5	105.7
Peanuts, lb	4.8	5.2	3.52	3.65	4.01	6.2
Tobacco: ¹						
Maryland, type 32	23.0	(²)	21.4	29.0	30.0	18.2
Cigar filler, types 41-45	14.1	(²)	9.9	6.7	6.3	11.1
Cigar binder, types 51-55	19.9	(²)	12.1	13.6	12.5	15.7
Apples, bu	.96	1.18	* 1.12	1.01	1.14	1.25
Beef cattle, cwt	5.21	5.44	7.10	8.52	8.63	6.77
Hogs, cwt	7.22	7.16	4.82	8.19	8.98	9.39
Chickens, lb	11.4	11.9	13.3	16.3	16.3	14.8
Eggs, doz	21.5	16.7	14.4	20.1	23.2	* 22.1
Butterfat, lb	26.3	23.4	25.6	34.7	35.7	* 31.8
Wool, lb	18.3	17.5	28.6	36.1	36.5	23.8
Veal calves, cwt	6.75	6.77	8.46	9.90	9.90	8.78
Lambs, cwt	5.87	6.30	8.12	9.05	9.14	7.63
Horses, each	136.00	138.90	75.00	70.30	69.90	177.00

¹ Post-war base.

² Prices not available.

* Adjusted for seasonality.

⁴ Revised.

Besides the improved demand flowing from the largest industrial income in our Nation's history, the Federal Government is buying large quantities of food for relief distribution and for export to Britain. In addition, 1941 farm income prospects have been raised by more than 500 million dollars by legislation increasing loans on basic farm commodities to 85 percent of parity. Total farm income this year will be about 9 percent of the national income, as compared with about 10 percent of the national income in 1929, and with 12 percent in 1910-14.

Farm cash income from marketings and Government payments totaled 307 million dollars more in the first 5 months of this year than in the like period of 1940. Income from grains and tobacco was smaller than in 1940; income from cotton, fruits, vegetables, and all livestock and livestock products, was larger. Government payments were smaller.

The following table gives comparable totals for recent years

Month and year	Income from marketings	Income from Government payments	Total
	<i>Million dollars</i>	<i>Million dollars</i>	<i>Million dollars</i>
May:			
1941.....	748	25	773
1940.....	592	28	620
1939.....	528	80	608
1938.....	521	44	565
January-May:			
1941.....	3,240	304	3,544
1940.....	2,852	385	3,237
1939.....	2,587	362	2,949
1938.....	2,639	212	2,851

FARM LABOR: Decrease

June reports showed there were fewer workers on farms this spring than last, but that farm production and marketing schedules were well maintained. June 1 production of milk was the largest on record for that date, production of eggs per 100 hens was at a new high, and marketings of fruits

and vegetables were a little larger than at the same time last year.

The reduction in the farm labor force this June 1 compared with last was in the number of farm family workers. Total of family workers this June 1 was 8,873,000 as compared with 9,131,000 on the same date last year. Total of hired workers this June 1 was 2,775,000 as compared with 2,765,000 a year earlier.

These figures suggested that hired workers lost to the selective draft and industrial defense industries had been replaced in part from the ranks of unpaid family workers.

COTTON: Up

Cotton has been selling at highest prices in years. The reason for this is to be found in the higher Government loan rates, a continuing strong demand for cotton by domestic mills, unfavorable growing conditions over much of the Cotton Belt, and the continued advance in the general level of commodity prices. Domestic mill consumption during the first 10 months of 1940-41 set a new high record of 7.9 million bales, as contrasted with 6.6 million bales in the like period of 1939-40.

Government loan stocks of cotton were reduced sharply in recent months, heavy withdrawals having been made by producers as prices advanced. As of June 21 the Government owned 6.1 million bales from the 1934 and 1937 crops, and held about 1.5 million bales as collateral on loans to growers. Total Government holdings were about 7.6 million bales as contrasted with nearly 11.1 million bales earlier in the season.

Exports totaled less than 1 million bales during the first 10 months of 1940-41, as compared with nearly 6 million bales during the like period in 1939-40. Prospects for exports during the coming year are even slimmer because of the limited oceanshipping space and the price disparity between American and foreign growths of cotton.

WHEAT: Big Supply

Much of the new winter wheat crop has been marketed by now or put under Government loan. Farmers have been getting higher prices this summer than last, even though prices currently are below loan values. In recent years of Government loans, prices usually have been below loan values until a substantial part of the new crop was put under loan. When prices advanced in response to the raising of Government loan rates, large quantities of 1940 wheat were redeemed by growers.

A tight storage and transportation situation has developed this season on account of the heavier utilization of storage capacity and the needs of transport facilities for national defense. To assure the best use of available storage capacity and transport facilities the Department of Agriculture has assisted in the organization of local committees in each of the principal market areas to handle the wheat crop, and is issuing special mid-month reports on probable production in leading producing States. Mid-month reports in July and August will relate to spring wheat production in the Dakotas, Montana, and Minnesota.

United States supply of wheat (production of winter and spring wheat plus carry-over) will be about 1,300 million bushels this season. This is about twice the domestic disappearance of wheat in this country in recent years. Last year, the total supply was 1,100 bushels. Supplies in Canada and Argentina also are unusually large. World stocks on July 1 were the largest on record for that date, the increases in the United States, Canada, and Argentina this season compared with last more than offsetting reductions in Australia, Europe, and North Africa.

FEED: Plentiful

Feed supply may be larger this year than last. Much depends upon

weather conditions this month and next, but prospects for the 1941 corn crop are good, and total corn supply may be larger this fall than last. The 1941 supply of barley (June 1 farm and commercial stocks plus indicated production) is 389 million bushels, about 21 million bushels more than the 1940 supply.

The 1941 oat crop has been indicated to be about 118 million bushels smaller this year than last, but the carry-over of oats is much larger and total supply of oats may be about the same as it was last year. June reports indicated a smaller hay crop this year, but that the total supply will be larger than the 1930-39 average of 89 million tons.

Western range feed conditions on June 1 were the best for that date since 1926. Growth of feed in some areas had been delayed a little by cool weather, but there has been considerable rainfall in most sections, and prospects for summer feed are good. Pastures have been extremely short in the eastern and southeastern part of the country.

Livestock prices have advanced relative to feed prices during the past few months, and livestock-feed price ratios are now much more favorable to livestock producers than in 1940. Feeding ratios probably will continue favorable, at least during the next few months.

CATTLE: Marketings

Cattle slaughter has been somewhat larger this year than last, but prices are higher in response to an unusually good consumer demand for meats. Continuation of this situation during the remainder of 1941 will net cattlemen the largest income in years.

Cattle numbers in the United States tend to fluctuate in cycles of about 15 years. The upward trend in cattle numbers after 1928 was halted by the droughts of 1934 and 1936, and num-

bers declined sharply until 1933. Since then, cattle numbers have been increasing, and as a result of the holding back of breeding stock for herd-building purposes, slaughter of cattle and calves was reduced moderately in 1938 and 1939.

Slaughter increased a little in 1940, and with numbers of cattle now approaching the 1934 level, slaughter can continue to increase at the same time that herds are being increased further. Much of the increase in slaughter this year to date as contrasted with the like period in 1940 has consisted of cows and heifers. But the slaughter of steers is increasing now, since there were many more cattle on feed last winter and this spring than a year earlier.

Cattle feeders reported this spring that marketings of fat cattle would be considerably larger this summer and fall than last.

HOGS: Higher

Hogs have been selling this summer at highest prices in 3 years. Smaller supply and increased demand this year than last have raised prices to profitable levels in relation to prices of feed, a continuing situation that means larger pig crops this fall and next spring. The pig crop this spring was larger than had been indicated by breeding reports last winter.

Hog producers are cooperating in the food-for-defense program of the Federal Government, feeding hogs to heavier weights, and breeding increased numbers of sows for the production of fall litters. On its part, the Federal Government has been supporting prices at profitable levels to producers through the purchase of large quantities of hog products for relief distribution and export to Britain. The Government has bought more than 250 million pounds of pork and lard since its purchasing program was announced in early April.

Slaughter supplies of hogs are decreasing seasonally now; through Sep-

tember the supply is likely to be smaller by 10 to 15 percent than during the same period last year. Marketings through June were larger than had been expected last fall; this was reflected in storage holdings of pork as of June 1 about 200 million pounds more than on that date last year, and of lard about 64 million pounds more than on June 1 last year. Storage stocks usually decline during summer and early fall.

WOOL: Valuable

The most valued wool clip in more than 20 years has been marketed by producers this season. The clip bulked about as large as that in 1940, but prices received by farmers have been about 30 percent higher in response to a high record demand by mills for the production of fabrics for military and civilian needs. Producers' income from wool will be considerably larger this year than the 109 million in 1940. Largest income on record was 147 million dollars in 1918.

United States production of wool this year plus the carry-over on April 1 last has been tentatively indicated at about 735 million pounds—approximately a 10-month supply at the current rate of mill consumption. Imports of wool will decline this summer, but the total for the year will likely set a new high record. Largest recorded imports to date totaled 378 million pounds in 1918.

LAMBS: Record

The 1941 lamb crop is probably the largest on record, but consumer demand is good, and prices continue above a year earlier. Production probably exceeded the 1940 lamb crop of 32.7 million head, since there are more stock sheep on farms and ranches this year than last, and lambing conditions have been favorable. June reports were that sheep and lambs had continued to make good gains in the Western States.

Western ranges improved more than usual during May, and with rains in most sections during early June, summer feed prospects were reported as good. Range prospects in some sections were the best in many years. Reports from the Western sheep States indicated favorable developments of both the early and late lambs this spring. It was indicated that in some sections spring lamb will be ready for market earlier than usual this summer.

Prices probably will average higher this summer and fall than last. Lamb prices usually decline from early summer to early fall as marketings increase, and last year the decline during June and July was quite sharp. This year it is unlikely that prices will decline so sharply, since consumer demand is better and prices of wool are higher.

TRUCK CROPS: Higher

Truck crops have been selling at higher prices this summer than last since supplies have been relatively small and consumer demand unusually good. The season started off with high promise as to supplies, but bad weather intervened, and prices have declined less than they normally do at this time of year. But vegetables respond quickly to good weather, and a few weeks of favorable growing conditions would greatly increase the market supplies. Supplies from market garden areas also are available now.

For similar reasons, the price of potatoes advanced sharply in early June. Drought cut down the prospective yield in the commercial second early and intermediate areas, and market supplies are smaller than at this time last year. Production in the second early group of States was indicated at 4 million bushels, or about 2.2 million bushels less than in 1940. The commercial crop in the first section of intermediate States has been indicated at 7.6 million bushels, or about 3.3 million smaller than in 1940.

The supplies of canned vegetables remaining from the 1940 pack have been rapidly depleted. But it is likely that supplies of truck crops for processing will be generally larger this year than last since the acreage of nearly every crop has been increased and early condition reports indicate good yields.

FRUITS: Increase

Mid-season estimates indicate a slightly larger supply of fruits this year than last. But the consumer demand for all foods is unusually good, and returns to fruit growers should be larger than in 1940. Larger crops of peaches, California dried prunes, apricots, strawberries, citrus, California grapes, and California plums have been indicated for this year; smaller crops of pears, cherries, and apples.

The peach crop for this summer has been indicated at 66.1 million bushels, compared with 54.4 million in the summer of 1940. The California crop is smaller this year, but the peach crop elsewhere in the country is much larger . . . Production of pears has been indicated at 30.3 million bushels as compared with 31.6 million last year. Production of Bartlett pears in the Pacific Coast States will be about the same as in 1940.

Reports in early June indicated that the carry-over of Pacific coast canned pears—five times the carry-over a year ago—will be the largest on record. This will tend to restrict the quantity of pears canned this season.

DAIRY: Increase

Milk production was setting new high records in early June despite the impairment of pastures by drought in the eastern half of the country. Prices were higher than at the same time last year, in response to a greater demand for fluid milk and for milk to be used in the manufacture of evaporated milk and cheese. Usually, the price of milk declines in June.

The situation as to the number of cows, the supply of feed, and prices points to a continued higher level of production of milk and dairy products this year than last. Larger production times higher prices should yield dairymen the best cash income in years. Nineteen forty cash income from dairy products totaled more than 1.5 billion dollars. Income in the first 5 months of 1941 was 711 million dollars as compared with 615 million in the like period of 1940.

Secretary Wickard announced in early June that on the basis of anticipated requirements, American cheese production should be increased by about one-third and evaporated milk by about one-fourth this year over last. Such an increase is equal to about 3 percent of the total milk produced last year.

An increase of 6 to 8 percent in milk production this year over last should make possible the desired increases in evaporated milk and cheese, and still allow some increase in production of butter and in consumption of fluid milk. However, it would be necessary to increase the production of evaporated milk and cheese more than the production of butter.

FATS, OILS: Up

Production of fats and oils from domestic materials may set a new high record this year. Production of butter, cottonseed oil, linseed oil, and peanut oil will be larger this year, and the output of lard and greases, although reduced, will be larger than had been expected earlier in the season.

Fats and oils are higher priced this year than last as domestic demand has increased, and imports of oilseeds and oils have diminished. Imports normally account for 10 to 15 percent of the total supply of fats available for domestic use, and of these imports coconut oil and copra from the Philippines usually comprise one-third. Government buying of lard and dairy products also has helped to strengthen prices.

The Department of Agriculture announced last month a revision in the agricultural adjustment program to enable farmers to increase the production of soybeans by harvesting a larger acreage for beans this year than last without incurring deductions in conservation payments. Officials indicated that the price will be supported, if necessary, at a level of approximately \$1 a bushel for soybeans.

An emergency castor bean seed production program also was announced. This provides for the planting of 1,700 acres of castor beans in 11 counties in the black-land area north and south of Dallas, Tex. Enough seed would be produced to plant 250,000 to 300,000 acres should it become necessary to increase domestic castor oil production next year.

EGGS: Increase

Total production of eggs was larger in the first 6 months of this year compared with last; further increase is expected in the last half of the year in response to favorable prices. Prices of both chickens and eggs have been higher this summer than last, stimulated by increased buying power of consumers and Government purchases in the food-for-defense program.

Production of commercially hatched chicks was 19 percent larger in the first 5 months of this year than in the like period of 1940; heavy bookings of chicks on June 1 for later delivery indicated a strong demand for late-hatched chicks. The demand for turkey poults also has been good. Prices of turkeys have been higher than on corresponding date last year.

The number of young chickens in sample farm flocks increased about 40 birds per flock during May—the largest May increase since 1936. About 8 percent more young chickens were reported on these farms this June 1 compared with last. Increases were reported the country over, varying from 3 percent in the South Atlantic to 20 percent in the Western States.

FRANK GEORGE.

Production, Prices, and National Defense

THE effect of the defense program on production has been to speed up industrial output sharply, calling into use nearly all of the plant which had been idle for nearly a decade. From August 1939 to May 1941 industrial production increased 42.3 percent. This contrasts with an increase of only 23.2 percent during the 21 months following the outbreaks of World War I—in July 1914.¹ The recent increase has been sharpest in durable goods including steel, machinery, and other defense materials, these showing an increase of 66.0 percent in the 21 months. During this same period there was an increase of only 22.9 percent in production of nondurable goods other than those made from farm products, and of 24.3 percent in production of foods, textiles, and tobacco products combined.²

Until quite recently, prices showed less marked changes than did production. In the accompanying charts the current price indexes (on the familiar 1926 base) are compared with the price movements during the comparable period of World War I with the earlier data adjusted to make the 1914 averages equal the 1939 average, in each case. Figure 1 shows the movements in all wholesale prices, in non-farm products, and in farm products. In both periods prices seem to have started a definite upward movement about a year after the war began. But in the next 6 months the advance in the general price level has been only about one-third as fast this time as it was in World War I. Since April 1, however, the rate of price ad-

This time a year ago a comparison was made in *The Agricultural Situation* of economic conditions at the beginning of World Wars I and II. The point was made that conditions differed greatly in these two periods—as to the farm supply situation, fiscal policies of Government, unused industrial capacities, and unemployment. The conclusion was that a sharp price expansion was unlikely for a long time ahead.

Events have moved rapidly since the outbreak of World War II. Production of industrial commodities for defense has expanded far beyond the scope contemplated a year and a half ago, Government spending for defense is exceeding the largest of estimates at that time, more than a million men are in training in newly created Army camps the country over, more recently an agricultural program calling for increased production of a number of concentrated foods has gotten under way.

The accompanying article discusses the comparable situation to date as to production and prices in World Wars I and II . . . Where do we go from here?—Ed.

vance has been almost as sharp as it was a quarter century ago.

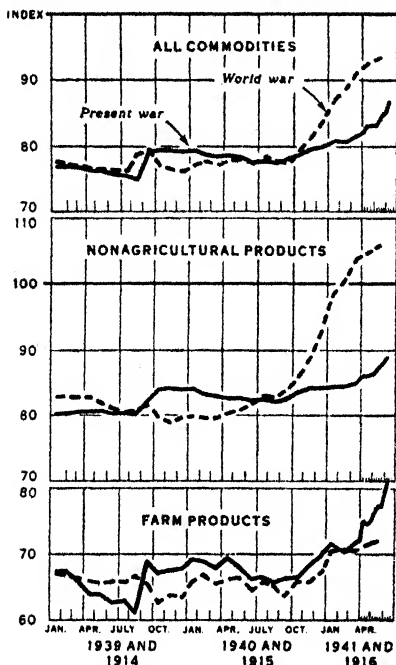
THE composition of the price movement has been quite different, however. In World War I industrial prices shot up rapidly, while farm product prices moved much less. In World War II, prices of farm products advanced more rapidly than in the corresponding period of World War I, while prices of industrial products increased little until this spring.

¹ Based upon index of industrial production compiled from 22 basic series. Federal Reserve Bulletin, Vol. 8 (1922) pp. 1414-21.

² Based upon preliminary estimates of indices of industrial production for May 1941 from Division of Research and Statistics, Federal Reserve Board.

FIGURE 1.-WHOLESALE PRICES OF ALL COMMODITIES, NONAGRICULTURAL PRODUCTS, AND FARM PRODUCTS DURING TWO WAR PERIODS, MONTHLY, AND WEEKLY SINCE APRIL 1941

(PRESENT WAR, 1926=100) (WORLD WAR, 1914-1939 AV.)



Farm prices had been relatively depressed in 1939, however, whereas at the start of World War I they were in about their usual relation to other prices.

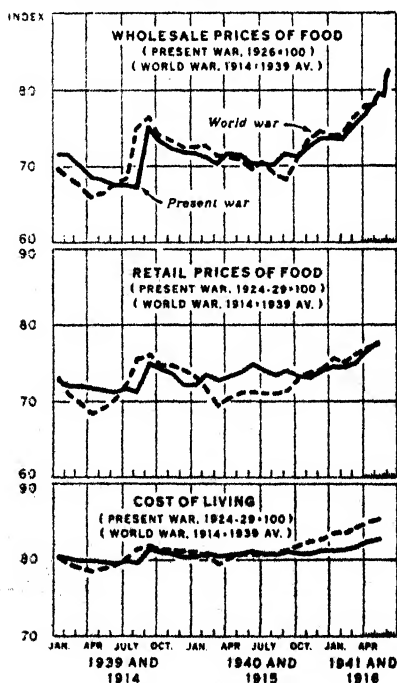
Retail prices, as usual, have been relatively slow to reflect the changes in wholesale prices. Wholesale prices of food in April were 10.7 percent higher than in 1939, retail food prices were up 5.7 percent, but the cost of living as a whole increased about 2.7 percent. This increase in the cost of living is only half as much as in the comparable period, 1914-16 (fig. 2).

Increases in prices of industrial products thus far have been most marked in hides and leather products, and in textile products. But in neither case have the advances been as much as they were 25 years ago (fig. 3). Price increases in metals and chemicals have been moderate as yet, particu-

larly as compared with the skyrocketing of prices of these products in World War I. Apparently efforts of Government and business to prevent general price advances have been at least partially successful. Consumer goods industries, including leather and textiles, were already operating at pretty high production levels when World War II began. Production of these goods could not increase so readily as the other products mentioned, since the unused plant capacity in these industries was relatively small.

ALMOST all price series show rapid upward movements since April 1, 1941. The rise in prices of farm products has been due in part to the policy of the Department of Agriculture to raise some prices to stimulate needed increases in future production and to Congressional action in raising the loan rates on certain export commodities, but probably in

FIGURE 2
PRICES OF FOOD AT WHOLESALE AND RETAIL, AND COSTS OF LIVING, DURING TWO WAR PERIODS

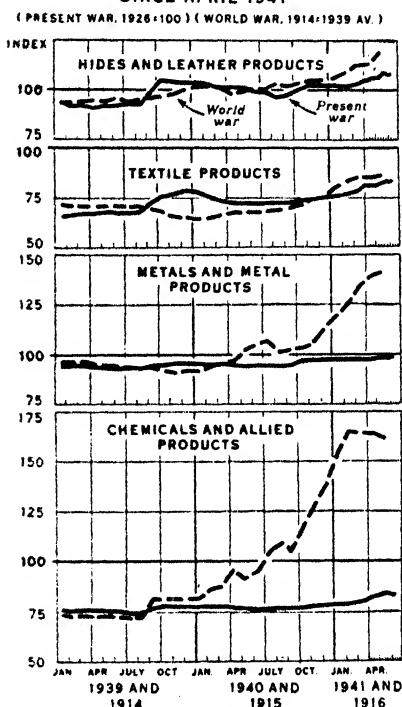


much larger part to the increasing demand due to the rapid rise of consumer buying power. The rise in prices of industrial products may reflect in part the fact that we have drawn on most of the available unused industrial capacity, and are now having to call into use obsolete high-cost plants; in part to the increasing shortage of shipping space, especially in coastwise movement, and the higher costs of the few ships available or of alternative methods of transportation; and in part to the fact that in some industries wage increases or the anticipation of wage increases are beginning to be reflected in higher selling prices.

Although prices of different commodity groups have moved at differing rates during the past year, they are not as yet seriously out of line with one another, as compared with their relative position prior to the 1929 depression. In the most recent week the all-commodities wholesale-price average stood about 87 percent of the 1926 base, nonagricultural products at 89 percent, wholesale prices of farm products at 81 percent, and wholesale prices of the several groups of industrial products at 84 to 108 percent. Retail food prices were meantime at 78 percent of the 1924-29 average, and the cost of living as a whole at 83 percent. The more rapid rise in prices of farm and food products has thus closed some of the gap between their prices and the prices of other products which opened up during the 1929 depression, but has not yet brought them back up fully into line with the prices of nonfarm products, either at wholesale or at retail.

NOW we face a situation where defense requirements are beginning to compete with civilian needs. Further imperative expansion in defense may necessitate a reduced output of automobiles, refrigerators, and other consumers' goods which use raw materials, metal-working equipment, and labor needed for defense produc-

FIGURE 3.-WHOLESALE PRICES OF SELECTED GROUPS OF INDUSTRIAL PRODUCTS DURING TWO WAR PERIODS. MONTHLY, AND WEEKLY SINCE APRIL 1941



tion. This situation would not necessarily mean sharp rises in industrial prices, since material reductions in output of some consumers' goods as a result of further expansion of defense production might check the growth in consumer incomes as well as in total goods production. New taxes or savings may also reduce consumer incomes. But whether or not prices continue to rise, the fact is that we are running into many bottlenecks in goods production. The continued existence of these bottlenecks will depend in part upon whether we take far-reaching action now to expand our industrial plant, especially for the production of basic raw materials, sufficiently to use effectively all our potential workers. A continuing rise in industrial prices in the face of millions of workers still unemployed would be only one symptom of our failure to meet this challenge.

Farmers have not as yet fully recovered from the ill-effects of the price spree of World War I. Although they desire and are entitled to reasonable income from their work, neither farmers nor workers could derive lasting gains from price rises that took away in continuously rising costs all that was gained from higher prices or wages. Farmers, therefore, have a vital stake in expanded industrial capacity, increased farm output of the products in demand today, allocation and priority rules, price

regulations, and in other programs or actions designed to prevent a general price inflation which would take away in rising costs as much as it would seem to give in rising prices. Effective action in these fields will enable farmers to participate in the gains from fuller production which defense is causing, without suffering from the inevitable aftermath of a spiral of skyrocketing prices and costs.

MORDECAI EZEKIEL and
VIRGINIA D. REEVE.

"Here Are Today's Livestock Markets—"

TALK to a livestock producer who has been in business since the turn of the century—one of the old timers—and he will admit that livestock marketing has been vastly improved since 1905, say. Farmers are better informed nowadays, he will tell you, especially when it comes to accurate and timely information on such factors as livestock production, rate of slaughter, and consumer demand for meat. He will describe the development of the livestock market news service and assure you that it didn't come a day before it was needed.

If your livestock producer is a real veteran, he can remember a time when the producer's only source of market information was the incomplete and conflicting reports compiled by trade groups. These reports were not utterly worthless but they were inadequate. Finally, in response to an insistent demand, the Federal Government stepped in—that was along in 1918—and established a workable market news service. That service has been expanded until today it covers most of the important livestock markets of the country.

ANY livestock producer or feeder can obtain adequate market in-

formation now. Daily market reports—single mimeographed sheets—are mailed out by the thousand from the branch offices of the Agricultural Marketing Service at 28 public livestock markets, and from several large producing areas where "direct trading" is important. More than 300 radio stations regularly broadcast market reports one or more times daily. And most newspapers, particularly in the major livestock-producing areas, carry market summaries as a regular feature.

Livestock producers and feeders as a general rule do not have to be "sold" on the market reports. As a matter of fact, a great many farmers are a little inclined to take the reports for granted, they have used them for so long. When they read in the daily report that "good to choice yearlings and light steers moved freely, selling at \$10.25-\$11.25 and better," they are likely to be unaware of the organization that makes the reports possible. Nevertheless, that organization is on the job every day so that farmers can keep in close touch with their markets.

Most of the activities of the market news service are concentrated in the great livestock receiving centers, such as Chicago, East St. Louis, Kansas

City, Omaha, and South St. Paul. Here it is that the factors of supply, demand, and quality are reflected in bidding and asking prices, and here it is that the intangible, but existent forces of "market sentiment" play such an important part. It is the function of the livestock market news service to observe the happenings in the market and to pass them on, in usable form, to the farmers of the Nation.

THE market day begins early for the reporting organization, which operates on the principle that "early to bed and early to rise, keeps the livestock industry market wise." At Chicago, for example, an employee comes to work at 4:30 a. m., when most of the city is asleep, and gets in touch with each of the 26 railroad terminals. The railroads report the number of carloads of livestock that each road expects to deliver to the Chicago market in time to be included in the day's receipts.

Estimates of the numbers of cattle, calves, hogs, and sheep that will be available on the Chicago market that day are tabulated by 6 a. m. and are immediately flashed over an 8,000-mile leased-wire circuit and by commercial wire to the other livestock market reporting offices. Information on the day's receipts is also made available to the newspapers, radio stations, and other news-disseminating agencies. Market receipts are an extremely important price-making factor.

The hog market reporter has completed his first rounds of the market by 8:30 a. m. and has released his first hog flash, which shows the tone of the market and the trend of prices. The reporter doesn't obtain his information by hearsay. He is right down in the thick of the trading. He observes the activity of buyers and sellers, checks on their bid and asking prices, and confers with them fre-

quently to learn what they are doing. In this way he quickly senses the trends and shifts, not only of prices but of market sentiment as well. This information on the tone of the market is included in the daily report, perhaps expressed this way: "Order buyers and shippers operated freely most of the time, the only hesitancy being on the heavier offerings."

THE second hog flash is released at 9:20 a. m. and shows the latest developments in hog trading. The market is never static. It ebbs and flows. Prices that start out "weak" may suddenly turn "strong" for no apparent reason, so the reporter must keep on the job.

By 9:30 a. m. the meat market reporter has got in touch with a number of packers, branch house salesmen and retailers and has learned what supplies are available, the character of demand, and the trend of prices. This information is condensed in a brief report that is flashed to the large consuming markets along the Atlantic coast and the great livestock markets in the producing areas.

Cattle, hog, and sheep market flashes are released at 10 a. m. by the reporters covering those markets. These flashes are based on all the information available on supplies, demand, tone of the market, trade conditions, and prices available up to that time.

A complete market report is released at 10:30 a. m. for transmission over the leased wire. This report contains detailed information on the cattle, hog, and sheep markets and includes a comprehensive series of price quotations segregated by classes and grades. Since livestock standardization work has been in progress, standard market classes and grades have been developed for all kinds of livestock, and these are uniformly applicable at all markets where livestock is bought and sold.

AN advance estimate of the number of head of each kind of livestock expected to arrive for the following day's market is released at 11 a. m. The information contained in this report is furnished through the voluntary cooperation of the railroads.

The closing market wire is released between 12:30 and 1 p. m. This release covers all three classes of livestock and contains statements on the tone and prices prevailing on the late market, shippers' purchases, estimated holdovers of hogs, and prospects for a clearance of cattle and sheep. This report just about winds up the day for the market reporters.

The mimeographed reports issued by the 30 field offices emphasize two kinds of information: Developments on the local market as collected by the market news reporters, and information that has been received from other offices either by wire or mail. With this system an office is not limited to its own material but can and does amplify its reports by the addition of information gathered at other points. Although each office stresses information regarding its own market more than material received from other markets, the information issued on "outside" markets is detailed enough for adequate comparisons. The market news offices publish a vast amount of market information, not only on livestock, but on meat and wool marketing as well.

NOT all livestock producers and feeders sell their animals at central markets, of course. A considerable number is sold locally, at concentration yards, local packing plants, or on the farm. This "direct" method of marketing has increased greatly in recent years and the market

news service has been adapted to the new development. Areas in which direct buying and selling operations are reported include central and northern Iowa and southern Minnesota, which comprise the most important swine-producing area of the country; the Intermountain and Pacific Coast States, where sheep and lamb production is especially important; and the Southeastern States of Georgia, Florida, and Alabama, where cattle and hog production is increasing.

Hog buying operations at 10 packing plants and approximately 22 concentration yards in interior Iowa and southern Minnesota are covered by an office at Des Moines, Iowa. Offices at Casper, Wyo., Ogden, Utah, and San Francisco, Calif., report the direct and contract sales of sheep and lambs in the Intermountain and Pacific Coast States. Cattle and hog buying and selling operations in the Southeast are reported by offices located at Thomasville, Ga., and Montgomery, Ala. In this area, buying and selling operations are carried on at a number of packing centers and at various auction markets, stockyards, and cooperative sales yards.

Reporters who cover the direct buying and selling operations over a wide area must work somewhat differently from those employed in the central markets. They use the telephone extensively in making contacts with buyers and sellers; they make frequent trips through their territory, calling at packing plants and sales yards and talking with those in a position to supply information. All—the reports at county points, and at market centers—spell out "Here are today's livestock markets."

HARRY HENDERSON,
Agricultural Marketing Service.

The number of stock sheep on farms and ranches on January 1 totaled 49.7 million head. This was nearly 1 million head more than a year earlier. It was the largest number since 1884. Approximately half (492,000 head) of the increase during 1940 was in Texas. Numbers increased 259,000 head in the remaining Western Sheep States, and 212,000 head in the Native Sheep States. Sheep production has increased greatly in Texas during the last 20 years.

Income of Typical Winter Wheat Farms

FARMERS in the Winter Wheat Area have maintained their net farm incomes during the past 30 years by changing their farm organizations to keep up with technological developments. This is the story told by an index of net farm income for specific types of farms in the Winter Wheat Belt. Many small farmers have been forced out—and with some depopulation of large portions of the area—more land has been available to those farmers who have stayed. These remaining farmers have increased the size of their farms for the efficient use of machinery and have had favorable incomes, relative to 1910-14, in most of the years since 1914 (fig. 1).

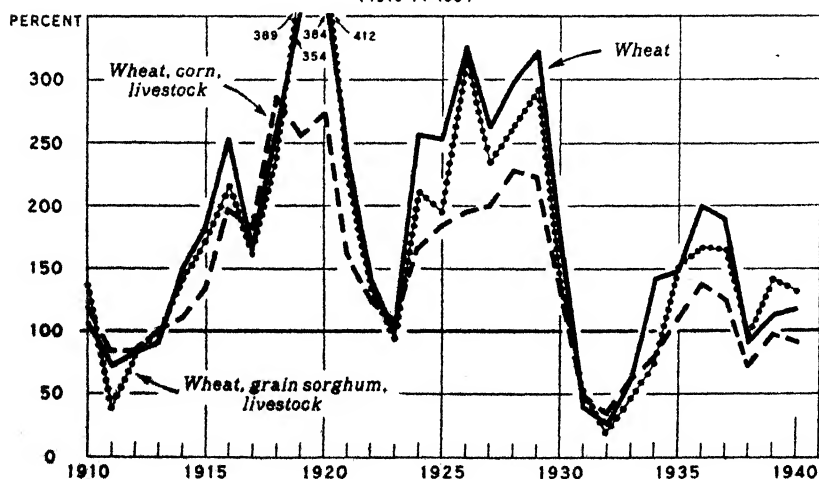
The years in which poor incomes occurred were separated into 3 periods, the worst covering the drought-depression years 1931-34. Ten years prior to this—in 1923—was the first unfavorable year with crops poor and prices relatively low. But even in 1923, the income index fell below 100 percent only for the wheat-grain sorghum-livestock type of farm. Favorable incomes were indicated for the

next few years, but this was stopped suddenly in 1931 when the depression drove prices to record lows. From 1931 through 1934, low prices combined with drought held incomes at low levels. From 1934 to 1937, returns were more favorable, but in 1938 net incomes were again reduced.

WHEN net farm incomes are compared (fig. 1), it is evident that the corn-livestock-wheat farm has had a less favorable income record than the other two types since 1933, and only in 1932 and 1933 was the wheat-corn-livestock system relatively as well off. The wheat-corn-livestock farmers' incomes did not fluctuate as much as either wheat or wheat-grain sorghum-livestock type farmers during the latter period. Differences in emphasis on wheat and other feed crops may be an added reason for the unfavorable position of the corn-livestock type (see table). Although the income of the wheat-grain sorghum-livestock type has been relatively the most favorable since 1938, it occupied a similar position only one other time since 1920.

FIGURE 1.—INDICES OF NET FARM INCOME OF WINTER WHEAT AREA FARMS BY TYPE OF FARM

(1910-14=100)



This was in 1931, when southwestern Kansas and the panhandle areas of Texas and Oklahoma harvested their largest wheat crops.

Although the indices reflect the fact that typical farmers in the winter wheat area have had relatively high incomes except for the drought-depression period, production and income have varied widely from year to year. Obviously, farmers are forced to adjust their personal living in accordance with these highly fluctuating incomes. Such adjustments are frequently hard to make.

The proportion of the current crop sold by December 31 differs from year to year. During the period 1910 to 1940 from 59 to 89 percent of the wheat produced was sold during the calendar year in which it was produced. Some wheat produced in 1931 was sold even as late as 1936. Corn-livestock farmers generally carried over a larger proportion of their wheat than wheat farmers or grain sorghum-livestock farmers. With indices computed on a calendar year basis net incomes fluctuated less than crop production.

A STUDY of the typical farming systems, upon which this net income index is based, reveals some striking technological changes such as: (1) An almost complete shift from horse operation to tractor operation; (2) changes in harvesting equipment; (3) fairly steady increases in acreage operated to adapt systems to the more efficient possibilities of mechanized farming.

Wheat farms are now almost entirely operated by tractors, whereas in 1910 draft animals furnished the drawbar power. Typical wheat farms were the first to make the shift, but wheat-grain sorghum-livestock farmers and wheat-corn-livestock farmers soon followed the general trend toward mechanization. Methods of wheat harvest have changed from binder or header harvest to nearly 100 percent combine harvesting.

The major expense on these farms is for power and machinery operation

and upkeep; tractor expense was 34 percent of total expenses on wheat farms and about 25 percent on the other two types (1937-39 averages). Autos, trucks, and other machinery together made up about 18 percent of the total expenses in the same period. Increased mechanization has permitted the operators of these farms, with the exception of grain sorghum-livestock farmers, to operate larger farms with about the same amount of hired labor. Although the total cost of operation has increased, the size of farm also has increased, and the average cost per acre has remained about the same.

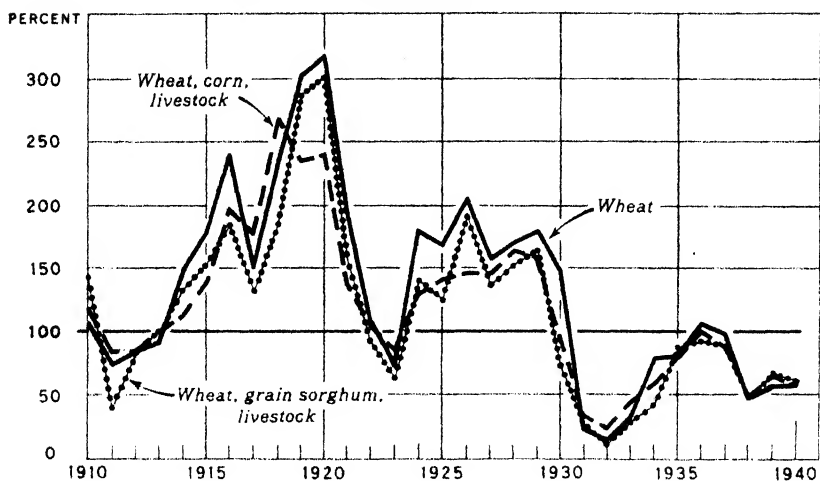
U PWARD trends in size of farm have been in evidence, but more pronouncedly during two periods. The first upward surge in size started

Organization of Typical Farms in
Winter Wheat Area, 1937-39

Item	Unit	Type of farm		
		Wheat	Wheat, corn, live-stock	Wheat, grain sorghum, live-stock
Acreage in farm...	Acres.	567	520	579
Acreage in cropland.	Acres.	503	398	449
Percentage of farm in cropland.	Pct....	89	77	78
Wheat:				
(Acres planted.)	Acres.	304	226	204
(Harvested)...	Pct....	77	81	74
(Yield per planted acre.)	Bu....	8.1	8.8	7.6
Corn.....	Acres.	18	43	3
Barley.....	Acres.	11	24	16
Oats.....	Acres.	5	15	11
Grain sorghum.	Acres.	32	21	69
Forage sorghum.	Acres.	7	22	17
Other hay.....	Acres.	4	19	10
Idle and fallow.	Acres.	32	22	29
Milk cows.....	No....	3.0	6.9	7.0
Pork sold.....	Cwt....	4.3	61.2	46.0
Beef sold.....	Cwt....	10.7	51.8	47.0
Poultry.....	No....	92	149	106
Proportion of gross income from various sources:				
Wheat.....	Pct....	67.0	41.1	46.6
Other crops.....	Pct....	9.3	10.2	8.7
Livestock.....	Pct....	4.5	30.8	24.3
Livestock products.	Pct....	4.2	8.5	7.8
AAA.....	Pct....	15.0	9.4	12.6
Total.....		100.0	100.0	100.0

FIGURE 2.—INDICES OF NET INCOME PER 100 CROP ACRES IN WINTER WHEAT AREA FARMS BY TYPE OF FARM

(1910-14=100)



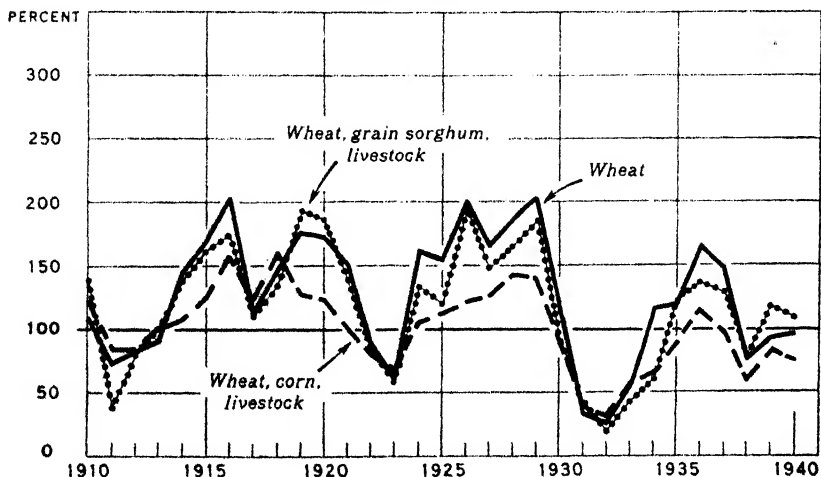
during World War I and continued until 1929. During the 1931-34 period total acres remained about the same, and in some areas, particularly the Southwest where the wheat-grain sorghum-livestock farms are more prevalent, there was a tendency toward smaller farms. Since 1936 the trend in size has again been upward. By 1940 typical wheat and wheat-grain sorghum-livestock farmers were oper-

ating twice as many acres as in 1910, and typical wheat-corn-livestock farmers were operating 50 percent more acres than in 1910.

The degree of adjustment in size has differed considerably among the types of farms. This difference affects the comparison of net farm incomes, but can be obviated by comparisons of income per 100 acres. Figure 2, constructed on a 100-crop acre basis,

FIGURE 3.—INDICES OF PURCHASING POWER OF NET FARM INCOME OF WINTER WHEAT AREA BY TYPE OF FARM

(1910-14=100)



indicates that most of the differences (in recent years) in the indices of net farm income have been caused by the degree of acreage adjustments. Adjustments from the quarter-section homestead were farther advanced in the older areas by 1910 where the wheat-corn-livestock type is more prominent than in the newer areas where the wheat and wheat-grain sorghum-livestock farms are concentrated.

WHAT do these net farm incomes mean in terms of purchasing power? They show that corn-live-

stock farmers have had a purchasing power of over 100 in 16 of the past 31 years, but only once during the past 10. Wheat farmers have been over 100 percent of their 1910-14 purchasing power in 20 of the 31 years, and their purchasing power has been more favorable than for the other two types in 15 of the 31 years. The wheat type farmers' purchasing power exceeded 200 percent in 1916, 1926, and 1929. Since 1938, the wheat-grain sorghum-livestock has shown the most favorable purchasing power (fig. 3).

WILLIAM D. BLACHLY.

WYLIE D. GOODSSELL.

FOOD CONSUMPTION

During World War I the people in this country reduced their consumption of wheat, sugar, and butter. This was done in order to send food to our allies and our soliders in France. Rice and other grains were substituted for wheat in the American dietary, sirup and honey for sugar, and other fats for butter. Consumption of coffee, tea, and cocoa was increased.

* * *

After World War I the consumption of sugar increased sharply, the consumption of butter got back almost to pre-war levels, but the consumption of wheat did not regain the pre-war volume. Sugar went up from an average of 80 pounds (raw basis) for each person in 1918 to 117 pounds in 1930, butter went from 14 pounds to better than 17 pounds during this period, but wheat flour in terms of grain rose only slightly—from 3.9 bushels to a little more than 4.1 bushels. Prior to World War I the consumption of wheat had been 4.9 bushels.

* * *

During the depression of the early 1930's there was a decrease in per capita consumption of all foods, but since 1934 the consumption of food

has increased. Increases have been especially marked during this period in consumption of dairy products, fats and oils, citrus fruits, fresh vegetables, and sugar. The total supply of food will be larger this year than last. Production of milk, dairy products, and meats will be the largest on record. Under the food-for-defense program, producers are being urged by the Department of Agriculture to increase the production of these and other foods this year.

* * *

People eat about the same total quantity of food now as they did 30 years ago, but the composition of the dietary has changed. Consumption of wheat and other cereals, potatoes and apples, beef, veal, and tea has declined; but consumption of vegetables (other than potatoes), citrus fruits, sugar, poultry, eggs, milk, manufactured dairy products (especially ice cream), edible fats and oils (other than lard and butter), cocoa, chocolate, and coffee has increased.

Consumption of lamb and mutton, pork and lard, butter, and sweet-potatoes has varied during the last 30 years, but the general level of consumption of these foods has not changed.—F. G.

New Products for Old

FOUR Regional Laboratories for Research on the Industrial Utilization of Farm Products were provided for by an act of Congress in 1938. These laboratories—the Eastern at Philadelphia, the Southern at New Orleans, the Northern at Peoria, Ill., and the Western at Albany, Calif.—have been built and are now partly equipped and staffed. To each has been assigned work on a number of the more important crops in the area it is designed to serve.

The Eastern Laboratory will work primarily on dairy products, potatoes, fruits and vegetables, tobacco, tanning materials, and animal fats and oils; the Southern on cotton, sweetpotatoes, and peanuts; the Northern on corn, wheat, and farm residues, such as stalks, straws and hulls; and the Western on fruits and vegetables, wheat, potatoes, alfalfa, and poultry products. The laboratories have been working for some time assembling needed information; in some cases work has been going on for several months, but naturally no reportable results are available at this early date.

THE work of these regional laboratories represents the first concentrated and sustained effort towards the industrial utilization of farm products. But it is by no means the first Department of Agriculture research falling into this classification. The first chemical research in the Department, in 1862, was on the utilization of grapes. Since then various projects have brought out many facts important in industrial utilization of materials that are products of the soil.

Citrus growers have received conspicuous benefits in recent years from chemical research. It was learned that green-colored but fully mature tree-ripened oranges could be made a uniform yellow, and consequently

With increasing frequency announcement is made of the development of new varieties of farm products or the discovery of new properties of old ones. These are the achievements of agricultural and industrial scientists engaged in scores of laboratories the country over in the blazing of new trails in the production and processing of farm commodities.

Achievements include important improvements in the quality, and additions to the variety, of the food supply. Continually increasing and expanding are the industrial uses for food, feed, and fiber crops. Of especial significance for the years ahead is the way in which our agricultural and industrial scientists are seeking to utilize the surpluses of products formerly produced for export.

The accompanying article is the first of a group containing outstanding examples of scientific research in these fields by the various agencies of the United States Department of Agriculture.—Ed.

more marketable, by taking out with ethylene gas the green color associated with the natural yellow. This method, now in general use on citrus fruits, cost the taxpayers about \$4,000 for the research and is estimated to be worth about \$4,000,000 a year to Florida growers alone.

The process of deaeration and pasteurization, developed in the Department, gave great impetus to the production and marketing of canned citrus juice. Producers of other fruit juices for market are beginning to benefit from this research. Grapefruit juice production has increased enormously. In Texas where 2,235,-

000 cases were packed in the 1935-36 season, the 1939-40 pack was 9,199,000 cases. The new method is even more important to producers of orange juice since the original canned product was less acceptable than the canned grapefruit juice of that time. In 1930-31 only 50,000 cases of canned orange juice were produced, but in 1939-40 the production had reached 4,000,000 cases.

Various citrus products have been developed at laboratories in California, Florida, and Texas. The United States has become practically independent of foreign sources for citric acid and essential oils of orange and lemon as a result of this work. Pectin is being made on a large scale from citrus fruit. As to the value of these products (citric acid, essential oils and pectin), the California Citrus Exchange reports that the growers now receive an additional \$2,500,000 a year.

A few years ago it was said that good cucumber pickles could not be produced in the South on account of high temperatures in the pickle curing season. The growing of cucumbers in this region was confined largely to production for the fresh vegetable market until recent research in cooperation with the North Carolina Experiment Station showed that, with a modification of the pickling methods used in the North, quality products could be produced under Southern conditions. It is now possible and practical to pack high-quality fermented cucumber pickles, including dill pickles, in the South. Many farmers are benefiting from this new development in North Carolina. As a direct result, North Carolina has become the largest pickle producing State in the South and the fourth largest in the country. The growing of cucumbers in North Carolina is worth annually about \$600,000.

Sorghum sirup is now a greatly improved and more uniform product as a result of the Department's research.

A new method uses an extract of barley malt to prevent scorching and jellying, caused by starch, and a yeast extract to control the tendency to crystallize or "sugar." This process, which includes the use of improved sirup-making equipment, is being extensively used in Alabama.

CHEMICAL research at various times has dealt with the development of farm products or byproducts for feed. The most recent work of this kind has had to do with the sweetpotato, which has become important as a possible large-scale source of carbohydrate feed, as well as of starch of the type now imported largely from the East Indies for industrial purposes. During the past season a cooperative sweetpotato starch plant at Laurel, Miss., made 2,700,000 pounds of starch. Twelve hundred cooperating farmers had produced the raw material.

One result of this research has been the testing of byproduct sweetpotato pulp as stock feed and the beginning of experimental work on converting ground sweetpotatoes directly into a dried feed. It has been announced that the State of Alabama is about to start a plant for making sweetpotato feed at the Atmore prison farm. For this purpose the State plans to grow about 500 acres of sweetpotatoes at the farm.

THERE are many examples of results of research more strictly in the industrial field.

The gay, fast colors that men and women are wearing today are largely the result of basic research by Government chemists who developed new technical methods for the economical production of intermediates required for the manufacture of fast and brilliant dyes for cotton. This research, it is estimated, has expanded the cotton market several million dollars a year.

Recently, the Patent Office granted a patent to Department employees,

who assigned it to the Secretary, on a process that opens up further possibilities for industrial uses of milk, corn, and sugarcane. The patent covers an improved method for using the lactic acid which can be made from these farm products for the preparation of artificial resins. These new resins belong to a class of plastics which are used mainly in paints, lacquers, and varnishes. Resins of this character have pretty well revolutionized the art of painting automobiles.

As a result of research by Department chemists on corncobs and other crop wastes, oat hulls are now used in making furfural, a valuable solvent used in the purification of rosin, for the production of lacquers and varnishes, and as a basic material in the manufacture of synthetic resins.

Chemists have also worked out waterproofing and preservative treatment for farm fabrics. The purpose has been to devise and improve waterproofing and preservative treatments for cotton fabrics exposed to the weather on farms and elsewhere. The chemists have also developed methods for lightproofing, mildewproofing, and fireproofing cotton fabrics. Some of these methods are now in commercial use.

At the Department's soybean laboratory at Urbana, Ill., progress

has been made in the development of paints, varnishes, and enamels from soybean oil, and plastics from soybean meal, which is the residue after the oil is extracted. Resulting, at least in part, from the work of this laboratory, substantial quantities of ready-mixed paints and enamels containing soybean oil are now sold widely. Other research has contributed to wider use of soybean meal and its protein which are going into a variety of products, including plastics and adhesives.

One paint company has made and sold more than a million gallons of soybean-oil paint. Since the natural soybean oil does not dry fast, methods of making it dry faster in paints and varnishes have been developed. The soybean paint is used not only for houses and barns, but is now being tried out experimentally for marking highways and streets. The laboratory has developed reasonably quick-drying varnishes that have stood up as well as other varnishes. Although most of the meal left after the oil is extracted is still used for feed and food purposes, new industrial uses are developing, among them a protein sizing for clear paper for packages and a leather dressing.

W. W. SKINNER,

Bureau of Agricultural Chemistry and Engineering.

What Is a Cow Worth?

IN 1940 the price of milk cows as reported by the Agricultural Marketing Service averaged \$61.00 per head. This was the highest price since 1930 and compares with the recent low of \$32.60 in 1934. The price of cows increased 87 percent from 1934 to 1940. In the same period the general level of prices paid to producers for farm products rose only 9 percent.

In the past 6 years there has been

an unusually rapid rise in the price of milk cows in relation to the general level of prices of agricultural products. During the past 2 years (1939-40) the price of cows averaged higher in relation to the general level of prices of farm products than in any 2-year period on record, since 1910. Beef cattle have also been relatively high in price. With favorable prices for cattle, farmers have saved a large number of heifer calves, held back

breeding stock, and expanded their herds. The number of milk cows has increased, the number of young dairy stock on farms is relatively large, and further increases in cow numbers are in prospect.

IN 1940 the price of butterfat averaged 28.5 cents per pound. The price of a milk cow (\$61.00) was equivalent to the price of 214 pounds of butterfat. During the three decades 1910-40 the price of cows averaged the same as 180 pounds of fat. During 1939 and 1940 the price of cows was unusually high in relation to both milk and butterfat and higher in relation to these products than can be maintained over a long series of years (table 1).

During the 31-year period 1910-40 the price of cows averaged the same as the price of 46.5 cwt. of feed grains. In the past 2 years they averaged the same as the price of 63.3 cwt. of feed grains. The price of cows has been high in relation to feed grains, byproduct feeds, and hay. Cow prices have been high in relation to the feeds required to produce a cow from a heifer calf.

In the three decades 1910-40 the price of a pound of butterfat averaged the same as the price of 25.9 pounds of feed grains. In 1939 and 1940 the price of butterfat averaged the same as 27.8 pounds of feed grains or 7

percent higher than the long time average. The price of butterfat in 1939-40, however, was somewhat below average in relation to prices of byproduct feeds (table 2). The relationship between dairy prices and feed prices in 1939-40 does not explain why milk cows were so high in relation to milk and butterfat and feeds.

A milk cow has a value for converting feeds into milk and also a value as a meat animal. In the 31-year period 1910-40 the price of milk cows averaged the same as the price of 936 pounds of beef cattle, on the basis of prices paid to farmers. During the cycle in cattle prices from 1910 to 1925, the price of milk cows averaged the same as the price of 955 pounds of beef cattle. In the following cycle 1926-34, approximately the same relationship was maintained. During the last 2 years, however, the price of a milk cow averaged the same as only 844 pounds of beef cattle or 10 percent less than the long-time average. Prices of milk cows in the past 2 years were low in relation to beef cattle, and also low in relation to prices of cutter and canner cows (table 1).

In 1939 and 1940 the relatively high price of cattle for meat was the principal factor in keeping the price of cows high in relation to prices of milk, butterfat, and feeds. The cycle in the purchasing power of milk cows,

Table 1.—Amount of Various Farm Products Equivalent in Price to a Milk Cow, Selected Periods 1910-40¹

Product	Unit	Period				Index numbers 1910-40=100			
		1910-40	1910-25	1926-34	1939-40	1910-40	1910-25	1926-34	1939-40
Butterfat.....	Lb.....	180	172	185	228	100	96	103	127
Milk (wholesale).....	Cwt.....	20.3	28.6	29.7	33.9	100	98	101	118
Feed grains.....	do.....	46.5	40.2	54.6	63.3	100	86	117	138
Byproduct feeds ²	do.....	38.4	35.2	41.8	45.0	100	92	109	117
Hay.....	Ton.....	5.3	4.6	5.8	8.2	100	87	109	155
Beef cattle.....	Lb.....	936	955	965	844	100	102	103	90
Cutter and canner cows ³	do.....	1,480	1,504	1,588	1,239	100	102	107	84
Veal calves.....	do.....	713	714	730	692	100	100	102	97

¹ Based on prices received by farmers.

² Average 1913-40.

³ Average 1913-25.

⁴ Based on wholesale prices of byproduct feeds.

⁵ Based on prices of cutter and canner cows at Chicago.

Table 2.—Amount of Feeds Equivalent in Price to One Pound of Butterfat, Selected Periods 1910-40 ¹

Product	Unit	Period				Index numbers 1910-40=100			
		1910-40	1910-25	1925-34	1939-40	1910-40	1910-25	1925-34	1939-40
Feed grains.....	Lb.....	25.9	23.9	29.4	27.8	100	92	114	107
Byproduct feeds ²	do.....	21.3	20.7	22.5	19.8	100	97	106	93

¹ Based on prices received by farmers.

² Average 1913-40.

³ Based on wholesale prices of byproduct feeds.

⁴ Average 1913-25.

which is 14 to 16 years long, is due primarily to the changes in the value of a milk cow for meat rather than to the changes in the value for converting feeds into milk.

A marked increase in cattle numbers is under way and a larger slaughter of cattle is in prospect. More

milk cows are also in prospect. These developments will tend to depress the price of milk cows in relation to other commodities. If the general level of prices rises during the next few years, the price of milk cows may not decline, but they would not be expected to increase as much as the general average.

E. E. VIAL.

United States: Exports and Imports of Specified Agricultural Commodities, September-April 1939-40 and 1940-41 and April 1940 and 1941 ¹

Commodities	Unit	September-April		April	
		1939-40	1940-41	1940	1941
Exports:					
Pork:					
Cured pork ²	Lb.....	Thousands 40,885	Thousands 8,887	Thousands 2,353	Thousands 1,101
Other pork ³	Lb.....	65,501	15,300	2,604	1,829
Total pork.....	Lb.....	106,386	24,187	4,957	2,930
Lard, including neutral.....	Lb.....	181,032	117,885	18,849	22,375
Wheat, including flour.....	Bu.....	33,995	26,712	3,837	4,854
Apples, fresh ⁴	Bu.....	2,717	692	96	51
Pears, fresh.....	Lb.....	64,028	14,573	250	342
Tobacco, leaf.....	Lb.....	224,290	99,044	15,864	13,898
Cotton, excluding linters (500 lb.).....	Bale.....	5,773	886	363	77
Imports:					
Cattle.....	No.....	418	511	93	93
Beef, canned, including corned.....	Lb.....	53,415	39,088	4,536	6,998
Hides and skins ⁵	Lb.....	218,141	303,723	22,601	50,212
Barley malt.....	Lb.....	45,089	24,485	6,754	3,115
Sugar, cane (2,000 lb.).....	Ton.....	2,071	2,199	293	492
Flaxseed.....	Bu.....	8,623	7,866	1,199	1,286
Tobacco, leaf.....	Lb.....	40,535	43,372	5,269	5,212
Wool, excluding free in bond for use in carpets, etc.....	Lb.....	129,456	334,754	12,466	72,769

¹ Corrected to June 17, 1941.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled or salted, and canned pork.

⁴ Includes baskets, boxes, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records, Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	Wholesale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in ⁶				
					Living	Production	Living and production		
1925	91	98	101	151	164	147	157	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	158	147	153	180	281
1930	91	88	96	126	148	140	145	167	277
1931	76	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	75	96	109	108	109	85	187
1934	75	61	77	109	122	125	123	95	178
1935	87	69	79	117	124	126	125	103	180
1936	103	80	80	118	122	126	124	111	182
1937	113	94	83	126	128	135	130	126	187
1938	88	73	81	115	122	124	122	125	186
1939	108	84	80	113	120	122	121	123	190
1940	122	95	81	115	121	124	123	126	.....
1940-June	121	90	81	113	121	125	123	.....	.....
July	121	93	81	113	.....	.....	122	129	.....
August	121	96	81	113	.....	.....	122	.....	.....
September	125	99	81	114	121	123	122	.....	.....
October	129	101	81	115	.....	.....	122	129	.....
November	133	104	81	116	.....	.....	122	.....	.....
December	139	108	81	117	122	125	123	.....	.....
1941-January	140	111	81	118	.....	.....	123	124	.....
February	141	111	81	118	.....	.....	123	.....	.....
March	143	113	82	119	124	125	124	.....	.....
April	140	112	82	121	.....	.....	124	138	.....
May	149	123	83	124	.....	.....	125	.....	.....
June ⁷	.....	.....	.....	128	.....	.....	126	.....	.....

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	140	153	163	156	96
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	163	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	80
1940	85	81	79	114	108	113	96	98	77
1940-June	83	81	104	112	102	104	81	95	77
July	78	80	89	98	110	105	88	96	78
August	76	77	79	107	110	109	90	96	78
September	77	76	73	114	114	111	104	97	80
October	80	78	79	99	112	116	112	99	81
November	83	79	71	98	112	121	120	99	81
December	81	79	75	93	111	128	122	101	82
1941-January	84	80	78	117	130	121	100	104	85
February	81	80	80	156	130	118	90	103	84
March	84	82	83	134	129	118	90	103	83
April	90	88	89	161	137	121	104	110	89
May	93	98	89	146	138	124	107	112	90
June	96	107	97	146	144	126	118	118	94

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation. Revised April 1941.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1925=100, divided by its 1910-14 average of 68.6.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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WITH the rate of industrial activity already by far the highest in the history of the country, more people working at nonagricultural occupations than ever before, and defense expenditures still increasing, domestic market prospects for most farm commodities continue good. For 1941 as a whole the general level of prices received by farmers may be nearly 20 percent above 1940. Most favored by price increases will be producers of meat animals . . . least favored, growers of fruits and miscellaneous crops. * * * On the other side of the ledger, rapidly rising farm wage rates and advancing costs for the things they buy are making farmers discount their gains in prices and income. Prospective income from farm marketings is the largest in 12 years, but farm wage rates and other costs also are higher. . . . And the rise in prices received as compared with prices paid has still only partially corrected the disparities of recent years. * * * The response to the Government's call for greater production of dairy and poultry products, under the food-for-defense program has been favorable, but still larger gains in output are needed. . . . Feed grain and hay supplies—needed for the larger production—are plentiful, perhaps the largest in 20 years.

Commodity Reviews

DEMAND: Good

ALTHOUGH improvement in the domestic demand for farm products since the defense program was inaugurated a little over a year ago has been fairly gradual, the cumulative effect for the entire period has been substantial. This is indicated by large increases in income from marketings and in prices received by farmers in recent months as compared with corresponding months in 1940. Since agricultural production has increased only slightly and exports have been small, it is evident that most of these rises are due to expansion in domestic demand and to new legislation affecting prices.

Industrial activity has advanced sharply since April, and is expected to average around 25 percent higher in 1941 than in 1940. The rate of activity is already by far the highest in the history of the country, more workers are employed at nonagricultural occupations than ever before, and defense expenditures are still increasing. The demands of consumers and defense needs are expected to continue to exert pressure on industrial facilities through the remainder of the year and longer.

Substantial purchases of foodstuffs under the food-for-defense program have added directly to the demand for livestock, livestock products, and some other farm commodities, and the domestic demand for some products also has been increased because of the difficulty of securing competitive imported commodities. This is particularly true of fats and oils. Higher governmental loans on 1941 crops have been anticipated in market prices of affected commodities. Taken together, these various influences plus a strong speculative and storage demand situation have resulted in

marked strength in prices of farm commodities in recent months.

Industrial plants under construction since the defense program was inaugurated will come into increasing operation during the last half of the year, furnishing a market for products of other plants, but the increases in production for defense will be offset at least in part by forced reductions in output of some nonessential products because of inadequacies of materials. However, the effect of diversion of materials from consumer to defense items will be to increase the proportion of total buying power available for purchase of food and clothing, and the net result probably will be continued improvement in consumer demand for farm products.

FARM LABOR: Demand

The largest July 1 demand for farm labor since 1920 was reported by crop correspondents, but farm employment and the available supply of labor for work on farms were the lowest of record for that time of year.

Through sharp increases in farm wage rates operators are still able to secure about as many hired hands as were being used a year earlier, but the pull of improved employment opportunities among the nonagricultural occupations has resulted in a substantial decline in the number of family workers employed at farming occupations. The Agricultural Marketing Service reports that the draft on able-bodied farm men for the defense industries and the Army has been sufficient to bring old men out of retirement to again become active farm managers. It is also reported that "farmerettes" are again making an appearance.

That farmers are solving their labor difficulties without any visible effects on output is indicated by the latest

report of the Crop Reporting Board indicating probable new high records of both crop and livestock production in 1941.

PRICES: Up

The index of prices received by farmers for their products rose from 112 in mid-May to 118 in mid-June and advanced to 125 by mid-July. An improving domestic demand situation, purchases of food under the food-for-defense program, the effects of farm loan rates on prices, and strong speculative and storage demand all have contributed to these price rises. The index of prices paid by farmers has also continued to rise, but at a considerably slower rate than the gain in prices received.

Prices farmers are getting for their commodities are on the whole about one-third higher than a year ago, compared with an increase of only around 6 percent in prices paid for commodities which they purchase. As a result of this more rapid increase in prices received than in prices paid, the ratio of the former to the latter

had by July increased to 97 percent of the 1910-14 average compared with 78 percent in July 1940.

Defense demands for industrial materials will compete more and more with civilian needs in the future, and price advances for the commodities farmers buy may become larger relative to gains in the prices received for

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
July.....	95	122	78
August.....	96	122	79
September.....	97	122	80
October.....	99	122	81
November.....	99	122	81
December.....	101	123	82
1941			
January.....	104	123	85
February.....	103	123	84
March.....	103	124	83
April.....	110	124	89
May.....	112	125	90
June.....	118	126	94
July.....	125	129	97

¹ Ratio of prices received to prices paid.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	July average, 1910-14	July 1940	June 1941	July 1941	Parity price, July 1911
Cotton, lb.....	12.4	12.7	9.54	12.81	14.32	16.49
Corn, bu.....	64.2	70.1	63.1	68.3	69.6	85.4
Wheat, bu.....	88.4	86.2	61.4	83.1	85.6	117.6
Hay, ton.....	11.87	11.78	7.10	7.82	7.66	15.79
Potatoes, ¹ bu.....	60.7	81.5	82.1	64.6	76.1	92.2
Oats, bu.....	39.9	40.9	28.3	33.3	32.7	53.1
Rice, bu.....	81.3	(²)	75.9	113.5	110.3	108.3
Tobacco: ¹						
Maryland, type 32, lb.....	23.0	(²)	22.0	30.0	35.0	18.6
Apples, bu.....	.96	.86	1.08	1.14	.95	1.28
Beef cattle, cwt.....	5.21	5.33	7.48	8.63	8.78	6.93
Hogs, cwt.....	7.22	7.25	5.78	8.98	10.20	9.60
Chickens, lb.....	11.4	12.2	13.6	16.3	16.8	15.2
Eggs, doz.....	21.5	16.7	16.4	23.2	25.6	³ 25.7
Butterfat, lb.....	26.3	23.5	25.9	35.7	36.6	³ 32.6
Wool, lb.....	18.3	17.5	27.9	36.5	36.3	24.3
Veal calves, cwt.....	6.75	6.74	8.56	9.90	10.27	8.98
Lambs, cwt.....	5.87	6.09	7.85	9.14	9.13	7.81

¹ Post-war base.

² Prices not available

³ Adjusted for seasonality.

the products they sell than in recent months. Already, farmers are contending with rapidly rising wage rates for hired labor because of the effects of military and defense demands on the labor supply. The rise in prices received by farmers to date as compared with that in prices paid has but partially corrected the disparities of recent years.

INCOME: Up

Higher farm product prices and increased marketings of several important livestock and livestock products are largely responsible for a substantial increase in farm income in recent months compared with the same months a year ago. Present prospects for crop and livestock production indicate a record volume of sales of farm products in 1941, and with an improved level of farm prices cash income from farm marketings may be as much as 10 billion dollars compared with 8,354 million dollars in 1940. The highest farm cash income of record was 14.6 billion dollars in 1919.

Not all of the estimated increase of around 1.6 billion dollars in farm cash income for 1941 will be clear gain. Farm wage rates have advanced rapidly, and there has been some increase in prices paid for commodities and services used by farmers in their agricultural operations. Furthermore, Government payments are not expected to be as large in 1941 as in 1940, when they amounted to 766 million dollars.

—P. H. Bollinger.

COTTON: Prices Higher

Cotton prices recently were the highest in 11 years. The 85 percent of parity loan rate made mandatory by 1941 legislation has been the principal price-stimulating influence in the recent rise, but other price-supporting factors include a record high level of domestic consumption, a reduced acreage planted to cotton in 1941 and generally unfavorable progress of the crop.

Mill consumption of cotton for the first 11 months of the current season totaled 8.8 million bales compared with 7.2 a year earlier and an average of 6.4 for the comparable months of the 5 years 1935-39. Although business in cotton textiles recently has been restricted, large order backlogs are still on the books of producers and raw cotton consumption is expected to continue around recent record levels at least for several more months. In contrast to the large increase in domestic consumption, cotton exports during the first 11 months of the current season fell 83 percent, from approximately 6 to 1 million bales.

Despite the small acreage planted to cotton this year, it is not at all certain that total disappearance for the coming season will exceed production. Thus, if the income of cotton producers is to be maintained, Government loan and other cotton programs will continue necessary.

WHEAT: Moving

New wheat continues to move to market in volume as harvesting of the 1941 spring wheat crop progresses. With a record carry-over of old wheat—about 400 million bushels—and a total winter and spring crop estimated by the Agricultural Marketing Service on July 1 as the fifth largest on record—924 million bushels—storage facilities are causing some concern. Congestion at Kansas City became so serious around mid-July that the railroads refused to accept additional wheat for shipment for storage there.

Latest estimates place the domestic supply of wheat for the 1941-42 season at a record of 1,325 million bushels compared with 1,099 million for 1941-42. This supply apparently would meet domestic needs and leave around 675 million bushels available for export and carry-over this year—an increase of around one-quarter billion bushels compared with last season. However, with continuation of Government loans

assured by the vote of wheat growers favoring marketing quotas on the current crop, prices have moved upward in recent months.

On the basis of a comparison with wheat prices in Canada it appears that domestic growers are getting around 40 cents per bushel more for their wheat now than they would be getting if no Government programs were in effect. Prices in mid-July were still 10 to 20 cents below loan rates, resulting in a large into-storage movement of new wheat to be held against Government loan.

As a result of the large wheat crop and the substantially higher prices this year than last, farm income from wheat gives promise of being more than 50 percent larger than that from any crop since 1937.

FEED: Supplies Up

Feed grain and hay supplies for 1941-42 are expected to be much larger than average—perhaps the largest in 20 years. There will be more livestock on farms, but unsealed supplies of feed grains per grain-consuming animal unit will be above the 1928-32 average.

Higher livestock prices resulting in part from the food-for-defense buying program have induced increased livestock feeding. As a consequence, the disappearance of feed grains during the second quarter of 1941 was larger than a year earlier. Prices of livestock and livestock products in relation to feed prices have been more favorable to heavy feeding operations since the announcement of the policy of encouraging increased food production. Industrial demand for corn is increasing.

CATTLE: Marketings Up

Commercial cattle slaughter in May and June 1941 was larger than for any previous corresponding months, reflecting in part a heavy movement of grain-fed steers and heifers. This may

reduce somewhat the expected large increase of well-finished cattle during late summer and early fall. Marketings of grass-fed cattle will increase seasonally during the next few months, however, and total supplies of slaughter cattle will continue larger than a year earlier.

Cattle prices so far in 1941 have averaged above a year earlier despite the record production of beef and veal. Improved consumer demand for meats has more than offset the effect on prices of the increase in slaughter. Although further improvement in consumer demand is anticipated, supplies of well-finished cattle will continue large during the next few months, and prices of such cattle are not expected to advance as sharply as they did in the last half of 1940.

Prices of feeder cattle and cattle of lower grades and lighter weights in recent weeks have been high compared with the usual relationship to prices of heavy well-finished steers. For instance, prices of heavy beef steers at Chicago in mid-July were only a few cents higher than a year earlier, whereas cow and heifer prices were up about \$1 and beef and sausage bulls about \$2. Good and choice grade steers weighing over 1,100 pounds were selling in mid-July at prices 50 to 75 cents below those for lighter weight steers of comparable quality, whereas a year before the price advantage was in favor of the heavysteers.

HOGS: Increase Started

The downward trend in hog production which began in 1940 has been halted. Whereas earlier indications were for a reduction of 10 to 15 percent in the 1941 spring pig crop, changed conditions caused farmers to alter their plans so that about as many pigs were farrowed this spring as last. The fall crop probably will increase substantially compared with that of 1940. Tentatively it is estimated that 4 to 5 percent more pigs

will be saved from the spring and fall crops of 1941 than were saved in 1940.

Although hog slaughter in the 1941-42 (October-September) season may total approximately 50 million head—about 5 percent more than in each of the 2 preceding marketing years—prices are expected to average higher, as the effect on prices of the prospective increase in supplies will be more than offset by improvement in consumer demand. Since the increase in hog marketings compared with those of a year earlier will be an outgrowth of the expected larger fall pig crop, the largest year to year gains in prices may be secured during the first half of the current marketing season (October-March) when slaughter supplies are likely to be slightly smaller than in corresponding months of the 1940-41 season.

Government purchases of pork and lard under the food-for-defense program continue as an important factor in the price situation. The Government is committed to the support of hog prices at least until the middle of 1943, although purchases will vary with market conditions and food-for-defense needs.

LAMBS: Large Crop

With weather and feed conditions exceptionally favorable last spring, the 1941 lamb crop turned out to be about 5 percent larger than that of 1940, according to AMS reports. Slaughter supplies during the grass lamb marketing season (May-November) probably will be a little larger than supplies a year earlier. Marketings of sheep and lambs will increase seasonally during the next few months as new-crop lambs are sold.

So far in the new lamb marketing season prices have declined less than in the corresponding period last year. The smaller seasonal recession in prices apparently is the result of a considerable improvement in consumer demand and practically no change in the volume of lamb market-

ings. The expected further improvement in consumer demand and higher wool prices than in 1940 will continue as strong price-supporting factors this summer and fall, and lamb prices probably will average higher than a year earlier.

WOOL: Consumption Up

Mill consumption of wool in the United States has been at record levels in recent months and imports of apparel wool also have been the largest in at least 20 years. The record demand for wool has resulted in the best prices to farmers in more than 10 years. Although indications are that mill consumption will continue large during the remainder of 1941, most mills are reported to have already purchased their needs for several months, and no material change in the domestic wool price situation is expected during the next few months. The major part of the 1941 clip has already been sold by domestic producers.

The record consumption of wool in recent months has been due in large measure to military requirements, although improved domestic consumer demand has been an important contributing factor. As long as the military forces are maintained at present expanded levels or increased further, Government demand for wool will continue an important market influence. Government wool needs for the 1941-42 fiscal year, without any further increase in the authorized strength of the Army, have been officially estimated at 259 million pounds compared with 244 million in 1940-41.

FATS AND OILS: Production Up

The 1941 production of fats and oils as a whole is expected to exceed slightly the record output of 1940. Although recent reports suggest somewhat smaller production of cottonseed and peanuts, there was a large carry-

over of 1940 crop oilseeds on January 1, and total vegetable-oil production probably will be larger than in 1940. Butter and tallow production also will be larger. These increases will more than offset expected moderate reductions in output of lard and greases. Outputs of oilseeds and oils in 1941, however, are likely to be reduced at least as much as domestic production is increased.

As a result of improved consumer demand, Government purchases of lard and dairy products, rising ocean shipping costs, reduced imports, and forward buying by dealers and large consumers, prices of fats and oils advanced sharply during the first half of 1941, with some items doubling in price. There were only moderate price gains for oilseeds and oilcake meal until late June, since when fairly substantial advances have been made. Although the immediate outlook is uncertain, further price gains are in prospect over the longer term.

DAIRY: Record

Milk production has recently been at record levels compared with corresponding periods of any previous year. Production per cow on July 1 was about the same as in 1940, but the number of cows being milked was larger. Still larger gains in output will be needed to supply the expanded markets visualized in April when the Department of Agriculture announced plans for encouraging increased milk production.

The butterfat-feed ratio in early summer was the second most favorable on record and is expected to continue more favorable than last year during most of 1941. Feed supplies are plentiful.

Production of manufactured dairy products in recent months, and cold storage holdings of butter and cheese on July 1 were much larger this year than last. However, the increases in consumer demand and in food-for-defense buying by the Government have more than offset the effect on

prices of increased production and large stocks. Prices of all dairy products are expected to continue much higher than a year earlier during the remainder of 1941.

FRUITS: More

Supplies of fruit in the 1941-42 season will be somewhat larger than in the preceeding season. The increase in the amount available for domestic consumption will also be larger since exports will continue to represent a very small part of total marketings. The price effects of the increased supply for domestic use will be at least partly offset by increased consumer demand and returns to growers probably will increase.

In California the peach crop is indicated to be 9 percent smaller than in 1940, but outside of California an increase of 48 percent is in prospect. Pear production is estimated at 14 percent above average, although 2 percent below 1940. There is a relatively large carry-over of canned pears, but the increase in consumer purchasing power and a shorter peach crop for canning probably will result in some increase in prices to growers. This will affect particularly the returns in the Pacific Coast States where about 61 percent of the 1941 pear crop will be produced.

The condition of apples in commercial areas on July 1 was reported by the Agricultural Marketing Service as 65 percent of normal compared with 62 percent a year earlier. The California valencia orange crop, for market during the summer, is estimated about 3 percent smaller than in 1940. Orange prices have risen recently, recovering to about where they were a year ago. The rise is associated with reduced competition from midseason oranges.

TRUCK CROPS: Higher

Vegetable prices are higher than they were a year ago, reflecting a much higher consumer purchasing power and

a moderate reduction in supplies. The trend of prices generally has been downward since June, as is usual when supplies from important areas in the northern States are increasing. However, prices are expected to continue to average higher than in corresponding periods of last year.

The production of truck crops has been increasing over a period of years and growers attempted to expand production this season, but unfavorable weather has prevented. The acreage harvested by mid-July was about 2 percent larger this year than last, but production had fallen 4 percent. The acreage of truck crops remaining for fresh market is estimated at 1 percent larger this season, with substantial reductions in all major groups of States except the Western.

Small stocks of canned vegetables, increased consumer purchases, expansion in Army and Navy buying, and the food-for-defense program (calling among other things for a 50-percent increase in the tomato pack) caused canners to contract for increased acreages of truck crops this season. Prices generally have advanced. Supplies apparently will be in line with requirements of the food-for-defense program except for the tomato crop, which may fall considerably short.

POTATOES: Higher

Reduced supplies of late potatoes are in prospect, and since consumer demand has improved considerably this probably will result in materially higher prices to producers this fall and winter than were received for late potatoes in 1940. However, potato prices usually decline seasonally until August or September. Potatoes from the intermediate crop available for immediate marketing are about 7 percent fewer this summer than last, and as a result prices are averaging somewhat higher. The indicated reduction in the supply for market from

this summer through next winter is even larger compared with that of 1940, and the supply is less than the average for the 1930-39 period.

Sweetpotato production is expected to total 71 million bushels—9 million more than in 1940 but 2 million less than the average of the previous 10 years. Prices have been high recently compared to those of earlier years, but when new crop potatoes begin to move in volume there may well be some narrowing of the year-to-year price gains. Nevertheless, the substantial improvement in consumer buying power and higher prices of most other food products should result in a considerable increase in returns to growers.

POULTRY AND EGGS: More

Farmers are holding back hens in order to take advantage of the relatively high egg prices, but they are selling more young stock this year than last and at better prices.

Better consumer demand is a big factor in both the poultry and egg situation. Recent heavy food-for-defense purchases also have been a strong market influence on eggs. With total egg production expected to be about the same this summer as last, the improved demand conditions will hold prices materially above those of 1940. By fall and winter, egg production is expected to increase to a new record, but the improved demand situation probably will more than offset effects of increased production, and prices are expected to hold well above 1940 throughout the year.

Prices of eggs and poultry continue high in relation to feed costs. During the week ended August 2 about 2.5 dozen (32 percent) fewer eggs were needed to buy 100 pounds of poultry feed than were needed a year earlier. The feed-egg ratio is expected to continue more favorable than a year earlier during the remainder of 1941.

Food Prices and Factory Wages

FOOD prices, always a subject of interest, take on added interest during the course of changes stimulated by war. Low-income consumers don't want to see higher prices. Organized labor, knowing that in past war periods food prices and living costs have risen, seeks higher wages in protection against actual or anticipated price advances. Farmers want higher prices because of increased costs and because it is chiefly through higher prices rather than increased volume that they can maintain their share of a rising national income. Others look upon rising food prices as a dangerous beginning of general price inflation.

While there have been a few spectacular changes in food prices since the present war began nearly 2 years ago, food prices in general have not yet reached a point where they represent inflationary difficulties. During June 1941, retail food prices averaged 80 percent of prices in 1929 compared with 74 percent in June 1940, and 75-77 percent during the years 1938-39-40. In July 1941 food prices were 1 percent higher than in June. These

price changes cover the cost of a standard food budget for factory workers as computed by the Bureau of Labor Statistics. It is therefore pertinent to compare these price changes with the wage earnings of factory workers. Such a comparison appears in table 1.

DURING the first 6 months of 1941, average factory wage earnings at an annual rate of \$1,372 per employed worker, \$192 more than the annual rate for the first 6 months of 1940 and \$70 greater than the average earnings of factory workers employed in 1929. During this 12-year interval, hours of work have been reduced and rates of pay per hour have increased, with the result that the 1941 earnings are approximately 5 percent above those in 1929. Obviously, with earnings somewhat above those of 1929, and food prices 21 percent below those of 1929, the purchasing power of factory pay rolls per employed worker in exchange for food is substantially greater than in 1929—about one-third greater.

TABLE 1.—Food and Nonfood Living Costs and Earnings Per Employed Factory Worker

[Index columns: 1929=100]

	Factory worker's earnings per worker		Retail value of 58 foods		Earnings available for nonfood items		Index of nonfood living costs
1929.....	\$1,302	100.0	\$415	100.0	\$887	100.0	100.0
1930.....	1,209	92.9	391	94.2	818	92.2	98.6
1931.....	1,086	83.4	322	77.6	764	86.1	94.5
1932.....	879	67.5	270	65.1	609	68.7	87.7
1933.....	854	65.6	264	63.6	590	66.5	82.5
1934.....	941	72.3	295	71.1	646	72.8	82.1
1935.....	1,015	78.0	331	79.8	684	77.1	82.2
1936.....	1,063	83.2	342	82.4	741	83.5	83.1
1937.....	1,179	90.6	353	85.1	826	93.1	86.1
1938.....	1,079	82.9	321	77.3	758	85.5	86.9
1939.....	1,153	88.6	311	74.9	842	94.9	86.2
1940.....	1,226	94.2	314	75.7	912	102.8	86.5
January-June 1940 ¹	1,180	90.6	314	75.7	866	97.6	86.4
January-June 1941 ¹	1,372	105.4	327	78.8	1,045	117.8	87.4

¹ Total for year at January-June rate.

Factory worker's earnings per worker derived from U. S. Bureau of Labor Statistics factory employment and pay roll data.

Index of nonfood living costs derived from cost of living indexes of the B. L. S. Retail value of 58 foods computed by the Bureau of Agricultural Economics from retail food prices of the Bureau of Labor Statistics

Another way of looking at food prices in relation to earnings is to deduct from current earnings the cost of the standard food budget, so as to see more clearly what is happening to the average standard of living in terms of nonfood items. At prices prevailing during the first 6 months of this year, the annual food budget cost \$327 compared with \$314 in 1940. While this is only a \$13 or a 4 percent increase over the past year, it is a reduction of \$88 from the cost of the annual food bill in 1929. In 1929, after paying \$415 for food, the average factory worker had left \$887.

On the basis of average earnings so far in 1941, after deducting \$327 as the present annual cost for the same quantity of food, the average factory worker has left \$1,045, which he may spend for other items in his cost of living budget or which he may spend for more food or more expensive food. The amount of money thus left over for nonfood items is approximately 18

percent greater than the amount left over in 1929; and inasmuch as prices of nonfood items in living costs so far this year have averaged 87 percent of the prices in 1929, the average employed worker so far this year has been able to buy 35 percent more in the way of goods and services other than food than did the employed worker in 1929.

Still another way of looking at these figures is that the annual retail cost of the standard food basket of 58 items amounting to \$327 represents only about 24 percent of the annual wages per employed worker, whereas the 1929 cost of the same quantity of food represented 32 percent of annual wages. The farmer's share in the consumer's food dollar is now less than it was in 1929. The relatively lower farm prices contribute about half of this saving in food costs (the reduction of \$88 from the 1929 food bill) and lower distribution costs in general contribute the other half.

TABLE 2.—Per Capita Incomes of Nonagricultural Workers, 1929, 1940, and 1941

(a) INCOME PER WORKER

	Dollars				Percent of 1929		
	1929	1940	January-June ¹		1940	January-June	
			1940	1941		1940	1941
	Dollars	Dollars	Dollars	Dollars	Percent	Percent	Percent
Manufacturing	1,302	1,226	1,180	1,372	94.2	90.6	105.4
Mining	1,430	1,270	1,254	1,379	88.8	87.7	96.5
Trade	1,342	1,203	1,196	1,238	89.6	89.1	92.3
Transportation, utilities, and communications	1,643	1,837	1,829	1,809	111.8	111.3	113.8
Service	964	838	835	855	87.0	86.6	88.7
Government (excluding military)	1,728	1,853	1,824	1,827	107.2	105.6	105.7
Total	1,372	1,306	1,280	1,396	95.2	93.3	101.7

(b) AVAILABLE FOR NONFOOD ITEMS ²

Manufacturing	887	912	866	1,045	102.8	97.6	117.8
Mining	1,015	956	940	1,052	94.2	92.6	103.6
Trade	927	889	882	911	95.9	95.1	98.3
Transportation, utilities, and communications	1,228	1,523	1,515	1,542	124.0	123.4	125.6
Service	549	524	520	528	95.4	94.9	96.2
Government (excluding military)	1,313	1,539	1,510	1,600	117.2	115.0	114.2
Total	957	992	966	1,069	103.7	100.9	111.7

¹ Total for year at January-June rate.

² After deducting these food costs: \$415 for 1929, \$314 for 1940, \$314 and \$327, respectively, for January-June 1940 and 1941.

COMPARISONS similar to the foregoing cannot readily be made for other groups or for the entire non-agricultural population since the available indexes of living costs apply only to factory workers. These workers now total around 10 million, but they represent only about one-fourth of all nonagricultural employed persons, many of whom live on budgets quite different from that of the average factory worker, because their annual earnings are either smaller or greater than average factory wage earnings.

During the first 6 months of 1941, when average factory pay rolls per employed worker were at an annual rate of \$1,372, those engaged in service trades earned at a rate of \$855, those engaged in wholesale and retail trades \$1,238, in mining \$1,379, in transportation, communication, and utilities \$1,869, and in government service (excluding military) \$1,827. All of these groups combined earned at an average rate of \$1,396 in the first 6 months of 1941 compared with \$1,280 in 1940 and \$1,372 in 1929.

In general, the effect of recovery since 1932 and the defense program so far has been to restore wage earnings of industrial workers and the money income of the whole nonagricultural employed population to about the 1929 level. But it should be noted that there are still several million persons out of work, partly employed or employed on government relief work who have yet to share fully in this improved situation.

If for each of the six groups mentioned above we allow retail food costs equal to those of the average factory worker and compare the balance with that of last year, we find a substantial rise of 21 percent in income available for nonfoods among the factory workers, and small gains of 1 to 3 percent among the other groups, with no change among government employees. For all nonagri-

cultural workers, there is shown an average improvement in nonfood income of about 11 percent over last year, and about 12 percent over 1929.

FROM the standpoint of a balanced price structure, food prices are still relatively low, as they have been ever since 1929, and in fact ever since the 1920-21 price collapse after World War I. But taking 1929 as a base, food prices during the first 6 months of 1941 were 79 percent and nonfood items 87 percent. Food prices, to have been in line with nonfood prices, needed to be about 11 percent higher. This suggests two observations: One, that such a price rise, if unaccompanied by advances in nonagricultural prices and wages, would have contributed toward a better balance between farm and nonfarm income without involving the danger of price inflation. Two, that with a national food bill of about 16 billion dollars for domestically produced farm products, the nation as a whole was getting its food for nearly 1¼ billion dollars less than it would have paid if 1929 price relationships prevailed, and that about half of this "saving" was "contributed" by farmers and the remainder by those engaged in food distribution.

The "disparity" between retail food prices in general and prices of nonfood living cost items was reduced only slightly during July, by a 1-percent rise in food prices and a smaller rise in nonfood.

With per capita incomes of most wage-earning groups restored to their 1929 levels or better, and with present food prices about 20 percent below those of 1929 and about 10 percent below nonfood prices, there would appear to be room for some further but selective rise in food prices; the real problem is how to close this disparity without running the danger of an increase beyond the point that would represent price inflation.

LOUIS H. BEAN.

Crop Insurance for 1942

A SHARPLY different plan for payment of premiums has been woven into the 1942 crop insurance program. The change, involving a commodity note, is expected to encourage greater participation in the program and, at the same time, effect a saving of about \$1,000,000 annually to the Federal Crop Insurance Corporation in the storage and handling of grain.

By signing the commodity note, which is a part of the insurance application, the grower is not required to pay his premium immediately in wheat or the cash equivalent as in former years. When the grower signs the note he promises to pay his premium in wheat or the cash equivalent on or before maturity. Maturity dates of the notes will vary from State to State. In general, these dates will correspond to the approximate time that the crop usually is harvested.

The signed note also stipulates that if the insured grower does not pay his premium on or before maturity, the Corporation is authorized to deduct the amount of the premium from any indemnity he might receive, or from the first Government payment the grower receives. When payment of the note is made by any one of these methods, the amount of the premium is figured in the cash equivalent on the basis of the current market price of the date of maturity. If the note is paid on or before maturity the grower may pay either in actual wheat or the cash equivalent as of the day he elects to make payment.

ABOUT 95 percent of all premiums under the 1941 insurance program were paid through assignment of the farmers' AAA payments. It is expected, therefore, that the majority of growers will elect this year to pay their insurance cost with deductions from Government payments. Thus,

except for the very few farmers who will pay their premiums with actual wheat on or before maturity, the Corporation expects to carry little actual wheat in storage. In former years, the Corporation has carried in storage wheat amounting to from 6,680,000 to 14,360,000 bushels. By setting maturity dates for the notes at harvest time or about the time indemnities are generally paid in each State or region, it is expected that premium collections and indemnity payments will be consummated almost simultaneously in most instances, thereby minimizing the volume of wheat that the Corporation will have to store.

The commodity note, which, incidentally, also will apply to the cotton insurance program, has another advantage for the farmer. Because of the requirement that all insurance applications must be signed before seeding and before specified dates (August 30 for winter wheat and February 28 for spring wheat) many farmers in the past have not been able to complete their farm plans for the coming crop year by the closing dates. This was especially true of tenants and sharecroppers, many of whom had not completed leasing arrangements by the time the application dates expired. The result was that many farmers who desired insurance were unable to obtain this all-risk protection against all unavoidable hazards. With the note plan, however, growers may sign the note any time on or before the expiration of the application period and the insurance will apply to all farms that the individual operates.

This arrangement also works to the advantage of the Corporation in that it reduces selection of risks that formerly operated to the program's disadvantage. In the past, a grower could select those farms which he wanted to insure. He might insure the high risk farm and not insure the low risk farm

Under the note plan, however, he must insure all farms which he operates or on which he has an interest in the wheat crop if they are in the same county. At the same time, this requirement eliminates the need for the insured farmer to sign separate applications for each farm as he did in the past. One application, one note, apply to all farms, thus making the writing of crop insurance a more simplified process and causing the farmer less bother and trouble.

A CHANGE in the 1942 program, designed particularly for the Pacific Northwest wheat States, extends the time in which the insurance is in effect. Under the 1941 insurance plan, the protection covered the crop up to October 1. For 1942 this time has been extended to October 31.

As harvesting preparations reached completion in the bulk of the winter wheat States the outlook for an encouraging result of the 1941 program and for a larger signup for 1942 was generally evident. More than 420,000 contracts were written on the 1941 crop.

The Corporation believes that a combination of factors—the ease with which growers may insure their farms, the commodity note plan, and the price situation—will tend toward inducing a larger signup next year. Increases in participation during the first years of crop insurance were achieved when wheat prices were low. Now the Commodity Credit Corporation loan program and higher parity prices have served to bolster wheat income at a considerably higher level so that wheat has become a more valuable commodity. Crop insurance to protect this cash crop has become increasingly important.

In 1941, the Corporation included in its rate structure the 1939 production and loss records. For 1942, the data for 1940 have been blended into the actuarial structure. In this way the Corporation is constantly improving the accuracy of its yield and rate structure, working for greater refinements and adjustments between the degree of risk as reflected in premiums and the degree of protection as reflected in yields.

LEROY K. SMITH,
Federal Crop Insurance Corporation.

Progress in Cooperation

THE cooperative associations active in 1913, the first year for which national statistics are available, were small local enterprises serving a limited area. With few exceptions they were concerned with converting milk into butter and cheese, receiving grain and loading cars, assembling and shipping livestock, collecting wool in lots large enough to attract buyers, and operating packing houses for fruits and nuts. A few cooperatives in the South operated cotton warehouses, and egg circles were beginning to appear.

Today the cooperative pattern is more complex. The trend has been

from the small local association to the larger regional or federated types of cooperatives. As late as 1920 small associations were handling the greater part of the cooperative business. Today there are some 50 federations, more than 100 large-scale centralized organizations, about as many sales and purchasing agencies operating on terminal markets, and nearly 200 bargaining associations.

Farmers' cooperative marketing, purchasing, and service cooperatives thus are in a sounder position today and have a wider field of opportunities than ever before. Yet at this time

cooperatives face the need for meeting effectively the changes and realignments which the defense program is making necessary. What are the successful cooperatives doing to keep in stride with today's defense tempo?

FOR one thing, in many fields they are maintaining their leadership in marketing, processing, and selling. One large cooperative, for example, developed the X-ray method of inspecting fruit which reveals defects hidden from old inspection methods. An olive cooperative perfected a machine which pits ripe olives at the rate of 750 to 1,000 a minute. It has enabled the association to lead the way in putting out a commercial pack.

Another cooperative which employs highly trained engineers developed a walnut-cracking machine which saves the association an average of approximately \$350,000 a season. A Michigan cooperative employs a battery of 120 electric eyes which, with unerring skill, sorted almost 10 million pounds of beans in a 4-month period with the help of only two or three persons to inspect and adjust the equipment. A machine which does a superior job of protecting eggs with a thin coat of oil has been devised by a poultry and egg cooperative. Several egg-marketing associations retard oxidation in the eggs by substituting carbon dioxide for the air inside the eggshell.

All-metal churns with capacities up to 2,500 pounds of butter, which a California cooperative developed, knead the cream into a firm butter having a composition with a minimum of variation. These churns can be cleaned with live steam or boiling water without danger from splinters, warping, or unsanitary cracks.

Among the accomplishments of one of the largest of the cooperative association laboratories is the discovery of certain basic processes which made possible the pectin industry. Pectin now is widely used in the confectionery, pharmaceutical, and medical fields.

Numerous cooperatives have become more useful to their members by the addition of supplemental services. Cotton gins have built refrigerated food lockers, added supplies, and cotton storage facilities; cooperative oil associations have taken on the purchasing of other supplies for their members; elevators keep busy in their "off" seasons with purchasing activities; other associations market a wider variety of products than they formerly handled.

Cooperatives generally recognize that they not only have the opportunity of serving their members, but also of providing definite assistance to all farmers by increasing efficiency, improving service, and lowering margins, thus making it necessary for private enterprises to approach the cooperatives' standards of operations. On the other hand, the existence of progressive private enterprises keeps the cooperatives on their toes and thereby helps to maintain their standards at a high level.

THE opening of the first farm bureau oil refinery in the United States in the spring of 1940 at Mount Vernon, Ind., marked a new step in cooperation. Another step was taken in September 1940, when the National Farm Machinery Cooperative, Inc. began assembling co-op tractors in its own plant at Shelbyville, Ind. This is a joint program of the Indiana Farm Bureau Cooperative Association, the Michigan Farm Bureau Services, the Ohio Farm Bureau Cooperative Association, and the Farmers Union Central Exchange of St. Paul.

Consolidations are being effected among creamery cooperatives; and local grain cooperatives in which control has passed to nonproducers are being reorganized along strictly cooperative lines. Many associations have adopted a revolving capital plan which not only tends to place the associations in a stronger operating position but also retains control of the

cooperatives in the hands of active producer members.

Realizing that future members of cooperatives will come from the young people now in school, many cooperatives sponsor tours of their plants and discussions of the cooperative way of doing business. They also conduct training schools for employees and prospective employees. The Farm Credit Administration has assisted by providing a series of publications on farmers' cooperatives, now widely used by teachers and students of vocational agriculture, 4 H Club members, Future Farmers, and farmers themselves. Likewise, cooperatives are paying more attention to the training of personnel and to membership education.

PERHAPS the most significant current trend in the cooperative picture is the steady increase in cooperative purchasing. In 1913, purchasing associations constituted less than 4 percent of all cooperatives for which information was obtained. Now this group accounts for nearly one-fourth of all cooperatives.

Cooperatives also are making extensive use of the credit facilities of the Central Bank and the 12 district banks for cooperatives established in 1933. During 1940 the banks made loans

totaling more than \$101,000,000, and from the date of organization to July 1, 1941, made cash advances on loans of approximately \$654,000,000. In addition, under the Commodity Credit Corporation's lending programs for 1939-40 and 1940-41, they purchased Commodity Credit Corporation paper from cooperative associations totaling approximately \$30,000,000.

Twenty-five years ago total membership in farmers' cooperatives was less than 700,000. From 1915 to 1925 membership more than quadrupled. It reached a high point of an estimated 3,660,000 in 1935-36. It is now placed at 3,200,000. Volume of business done has exceeded 1 billion dollars a year since 1921, and in more than half the years since then has totaled more than 2 billion dollars.

The present ranking of the several cooperative groups as determined by dollar volume of business is: dairy products; grain; purchasing; live-stock; fruits, vegetables, and nuts; cotton and cotton products; poultry and eggs; tobacco; wool and mohair.

The 10 leading States in the amount of business transacted are California, Illinois, Minnesota, New York, Iowa, Wisconsin, Ohio, Michigan, Washington, and Texas.

GEORGE H. THOMSON,
Farm Credit Administration.

Farm Products: Producer to Consumer

IV. Processing

THE basic processes by which the raw products of the farm are made usable—such as grinding, baking, churning, curing, and preserving—have been known and used for thousands of years. Nevertheless, during the last 75 years food processing has undergone changes and improvements as striking as those which have come in other parts of our industrial system. Many of the tasks of food preparation have been transferred from the kitchen

to factories where mechanization and mass-production techniques could be applied.

Within the lifetime of people now living, such vastly important developments as artificial refrigeration, milk pasteurization, and the preservation of food in air-sealed containers have been brought into general use. New techniques of food processing have been developed, and many different kinds and forms of food are now con-

sumed which were unknown to our grandparents. All of this has naturally affected the economic organization of our food industries, our food habits, and our general mode of living. The added functions and services which our food industries now perform explain in part the increase in the price-spread between farmer and consumer.

A typical example of the evolution in food processing is the shift of bread baking from the household kitchen to the modern large-scale bakery. First came the small local or neighborhood bakery, catering direct to nearby consumers. As cities and towns increased in population the output of some bakeries expanded and these larger concerns found that they could distribute their product to consumers more effectively through retail stores handling other foods than by selling direct. Then more recently came consolidations into large-scale organizations operating branch plants on a regional or Nation-wide basis. This shift from small- to large-scale units was facilitated by the increased use of machines for performing the various operations required in making and handling the products, and with it came many changes in the variety and kinds of products manufactured. Probably no operation in the baking industry as now performed shows greater contrast with the methods of a few decades ago than the procedure followed to insure sanitary handling of the products. Wrapping each loaf of bread in waxed paper is a fairly recent innovation, and still more recent is the practice of supplying consumers with bread sliced by machines ready for serving.

CANNING and preserving are food-processing methods which have been developed into large commercial industries especially important to agriculture. The growth of these industries together with the improvements in artificial refrigeration and in high speed transportation have made

possible the fruit and vegetable industry as it exists today. Commercial canning had its beginning more than a century ago but the industry made little growth until after 1870. Although expansion was rapid between 1870 and 1900 the most outstanding developments have taken place within the last three decades. Enactment of pure food laws to prohibit product adulteration, improvements in processing technique, particularly in the field of mechanical operation, and the opening of new areas of fruit and vegetable production have all contributed to the growth of the canned and preserved food industries.

In the last three decades the per capita consumption of canned fruits has increased almost fivefold and that of canned vegetables and dried fruits has doubled. Particularly outstanding has been the increase in the quantities of fruit juice produced and consumed. The fruit-juice industry is of comparatively recent origin. It began with efforts to divert part of the expanded production of certain fruits, particularly citrus fruits, from the fresh market to other uses so as to avoid market demoralization. Consumers readily accepted the new product; and with demand increasing and fruit production expanding, the juice industry has increased its output at a tremendous rate.

IMPROVEMENTS in processing technique have resulted in many changes in the meat industry. These are reflected not only in the products sold but in the methods of handling and in the types of agencies engaged in the industry. Artificial refrigeration has been a major factor in shaping this industry's development; consequently, every improvement in refrigeration has had some effect on the meat business. The introduction of refrigerator cars about 1870 made it possible to conduct cattle and sheep slaughtering operations in the Middle West, near the center of livestock pro-

duction, and eliminated the need of shipping animals to the eastern seaboard for slaughter. More recent improvements in refrigeration have made possible the use of motortrucks in transporting meats over wide areas and have greatly reduced the seasonal fluctuations in meat-curing operations. Likewise, better refrigerating facilities for retail stores have made it possible to provide the consumer with a greater variety of meats and meat products throughout the year.

Other changes in processing techniques in the meat industry which have resulted in changes in marketing are those in methods of curing and in the kinds and varieties of products manufactured. Early curing methods were restricted largely to the use of strong solutions of brine or to the application of liberal quantities of dry salt to the meat to be cured. When ready for use the product often was so salty as to be unpalatable. With the methods now used cured meats generally have a milder and more agreeable flavor than those formerly sold and seldom show evidence of excessive saltiness.

Consumers are now supplied greater varieties of special meat products, including various kinds of sausage, meat loaves, and canned meats. Sausage production in the last 40 years has increased at a much greater rate than either population or total production of all meats.

IMPORTANT changes in processing technique have taken place in flour milling. For many hundreds of years flour was made by crushing grain between two stones by a revolving motion of the upper one. Separation of the flour from the bran was done with crude sieves. Gradually, improvements were made and the capacity of the mill unit was increased, first by the use of water power and later with steam. But until late in the 19th century the basic principles of milling were not greatly different from those 2,000 years earlier. Then came the method of crushing grain between steel

rollers instead of between revolving discs or stones which not only greatly increased the capacity but also reduced the cost of grinding. This development meant the practical elimination of the small gristmills which were to be found in almost every community and centralized and relocated the milling industry.

Another important improvement in milling technique was in the method of separating flour from bran by the use of air currents instead of sieves. This discovery about 1875 made it possible for the first time to manufacture flour from spring wheat comparable in quality with that from winter wheat. The result was that wheat production expanded rapidly in Minnesota, and North Dakota, and South Dakota; and Minneapolis soon became the leading flour milling center of the country.

THE contribution of the technologist to the dairy industry has been to increase the number of palatable food products which may be made from milk, insure maintenance of high quality and freedom from impurities during the entire period of processing and handling between the producer and the consumer, and—recently—to develop new fields of nonfood use for certain dairy products.

Artificial refrigeration has been of special importance to the dairy farmer because without it relatively little ice cream would be produced, nor could fresh milk be easily and safely supplied to the great majority of urban consumers. The application of the general principles of pasteurization in handling milk was an important development in dairy processing technique because it provided a means of insuring products free from bacteria harmful to human health. Prior to its introduction there was great risk of disease epidemics originating from the fluid milk generally sold in towns and cities.

The discovery of methods for making condensed and evaporated milk and dry milk powder was of great

significance to dairymen because it created new outlets for their products and strengthened the demand during the flush periods of production. Another very important development has been in the production of processed cheese. By various methods of blending, many different kinds and varieties of cheese have been made available to the consuming public, thus tending to stimulate the demand for the product and increasing its consumption.

ONE of the most important recent developments in food preservation is quick-freezing, a process whereby extremely perishable products are subjected to a very low temperature in such a way as to freeze them without destroying the cellular structure, as happens when ordinary freezing methods are used. Quick-freezing, still in its initial stages, is being used mostly in the marketing of fish and those fruits and vegetables that deteriorate rapidly in quality soon after harvest. This includes the various berries of soft tissue, cherries, peaches, certain fruit juices, green peas, lima beans, asparagus, and sweet corn.

In the present stage of the quick-freezing industry, much of its output is taken by the hotel and restaurant trade and by concerns manufacturing other products, such as ice cream and bakery goods. Sales to consumers through retail stores are increasing, however, and as the products become better known and more readily available they probably will come in much greater demand. The net effect of this method of processing may be to cause some relocation of production areas and to eliminate wide seasonal fluctuations in supplies for consumers.

THE increased mechanization of food processing and the shift to largescale factory production have been accompanied by an increasing tendency to package the output at the plants in consumer-size units and to discontinue the practice of selling

in bulk and leaving to distributors the responsibility of doing any packaging or sorting. Taking over the packaging function caused processors to give increased attention to package improvement, including the use of more expensive package materials, because the package or container used serves not only to protect their product until it is delivered to the final purchaser but is also a means of identifying it with distinctive brands and trade marks. From the consumers' standpoint the package serves not only as a protection for the product but also as a convenience in such handling and storage as may be necessary before the product is finally consumed.

Whether or not the practice of selling more goods in package and in smaller units and of using more expensive package materials has contributed greatly to the widening of the price spread between the farmer and the consumer is difficult to determine. The added costs resulting from more packaging at processing plants and selling in smaller units may be offset to some extent by the savings that result from a reduction in the number of weighing and packaging operations in retail stores and the elimination of the waste that occurs when products are handled in bulk.

ALONG with the technological changes in food manufacturing have come changes in its economic organization. There has been a steady transition toward large-scale organization, as in other parts of our national economy. All branches of the food industry have shown this trend. National concerns operate in the fields of meat packing, dairy manufacturing and distribution, biscuit making, and fruit and vegetable canning. The most rapid rate of corporate expansion in the food industries came during the twenties; developments since that time have not been so striking. But the tendency is still in evidence, and appears likely to continue.

It is evident that all of these developments are of the utmost consequences to farmers and consumers. They affect the variety and palatability of the national diet, the localization of agricultural production, the spread between the prices farmers receive and those consumers pay, and the competitive relationships within the food industries. In this age of specialization, machines and division of labor have made mass production possible and brought many changes in the amounts and kinds of services provided by the marketing system which bridges the gap between the

farmer and the consumer. In general the trend has been for more and more service for each and especially for the consumer. But as services have increased and more products have been provided, the costs of distribution have tended to rise. These increased costs, however, to a large extent reflect the general rise in wage rates which accompanied the industrial expansion in the first three decades of this century and which made possible better living standards for the great mass of consumers.

C. A. BURMEISTER.

A. C. HOFFMAN.

Income of Typical Tobacco Farms

IN southern Virginia there is a large number of farm families who for generations have depended very largely on tobacco production for their living and financial progress. This group is made up of producers of two types of tobacco, flue-cured and fire-cured, depending largely upon type of tobacco soil available. The financial success of families in these two groups is measured for 31 years in the accompanying charts. Net farm incomes of typical producers of flue-cured tobacco in Virginia have generally been well above the farm incomes of typical producers of fire-cured tobacco during the past 31 years.

Owing to an especially favorable demand for tobacco during World War I, the index of net farm income of producers of flue-cured tobacco rose to a high of 565 percent of 1910-14. The index for producers of fire-cured tobacco rose to 363 in the same period. Both indices declined after the war, but the index for producers of flue-cured tobacco remained considerably above 100 until 1930, while the index of farm income for producers of fire-cured tobacco immediately fell to 91 in 1920, and was below 100 during 4 of the next 10 years.

Except for 1940 the index of net farm income for typical producers of fire-cured tobacco during the past 11 years has been considerably below 100 percent of 1910-14. In contrast to this the index for typical producers of flue-cured tobacco has been considerably above 100 during all but 3 of the past 26 years. The index of farm income for the latter group has averaged 210 since 1933.

THESE shifts in income are the combined result of changes in foreign and domestic demand for tobacco, prices of tobacco, and changes in farm organization made by farmers to meet changes in demand and prices. Tobacco receipts including government payments make up about 75 percent and 85 percent respectively of the gross income on fire-cured and flue-cured tobacco farms. Any change in the markets for this one crop materially affects the income and operations of tobacco farmers.

Flue-cured tobacco is one of the principal types of tobacco used in the manufacture of cigarettes. During World War I, vastly increased cigarette consumption stimulated the demand for this type of tobacco. The price

received by Virginia producers rose from 10.7 cents per pound in 1910 to 48.8 cents per pound in 1919. The total acreage of this tobacco produced by Virginia farmers rose from approximately 100,000 acres in 1910 to 152,000 acres in 1919 and to 169,000 acres in 1920. The average total acreage of 114,000 in 1937-39 was 111 percent of the acreage in 1910-14.

In contrast to this, the total acreage of fire-cured tobacco was at a peak of 80,000 in 1910. The acreage declined sharply to 50,000 in 1914, then increased to 70,000 acres in 1918. Since 1918 the acreage has steadily declined, and in 1937-39, at 23,000 acres, it was only 34 percent of the acreage in 1910-14.

THE export market has been more favorable to producers of flue-cured tobacco than to producers of fire-cured tobacco. Exports of flue-cured tobacco in 1937-39 were 120 percent of the exports in 1923-26. Exports of fire-cured tobacco in 1937-39 were only 31 percent of what they were in 1923-26.

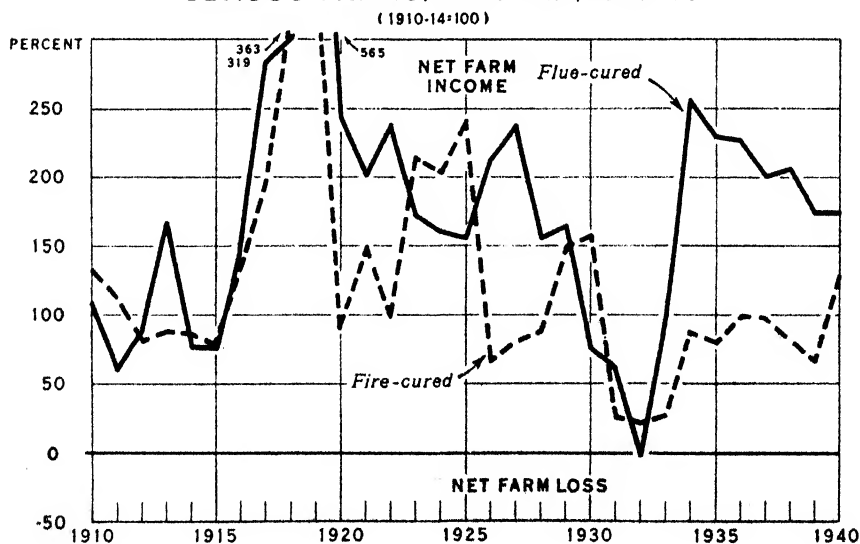
Fire-cured tobacco (used largely for snuff and Italian type cigars, chewing, and nicotine) has been largely an export crop; for example, in the middle 20's well over half of the Virginia fire-cured crop was exported. Exports and production have been steadily declining for years.

Unfavorable markets and resulting lower prices have caused some producers of fire-cured tobacco to abandon the enterprise. Some who formerly produced fire-cured tobacco have no tobacco today, but others whose farms have suitable soils have shifted to the production of flue-cured.

The typical producer of Virginia fire-cured tobacco has gradually reduced his acreage of tobacco and now has one-third less acreage than in 1910-14 or 1928-32. He is getting about 20 percent higher yields than in 1928-32 and is producing about 87 percent as much tobacco.

The typical producer of flue-cured tobacco has decreased his acreage of tobacco only 10 percent from the 1910-14 or 1928-32 average; and yet his yields are 37 percent greater and

INDICES OF NET FARM INCOME OF TYPICAL TOBACCO FARMS, VIRGINIA, 1910-40



his production approximately 20 percent greater than in either 1910-14 or 1928-32. The total amount of fertilizer used on both types of farms has

Organization of Typical Tobacco Farms, 1937-39

Item	Type of farm	
	Fire-cured (type 31)	Flue-cured (type 11)
Acres in farm	118.1	133.6
Acres cultivated	44.5	48.2
Percentage of farm cultivated	37.7	36.1
Acres tobacco	5.1	7.3
Yield of tobacco, pounds per acre	803	737
Acres corn	9.0	10.8
Acres other grains	8.9	6.8
Acres hay	7.0	7.0
Acres rotation pasture	9.0	6.3
Acres permanent pasture and woods	67.1	79.4
Workstock, head	1.8	2.0
Cattle, head	3.8	3.2
Hogs, head	2.5	2.1
Hens, number	38.6	36.0
PROPORTION OF GROSS INCOME FROM VARIOUS SOURCES		
	Percent	Percent
Tobacco	57.5	81.4
Other crops	13.1	5.3
Livestock	13.9	7.9
Other	15.5	5.4
Total	100.0	100.0

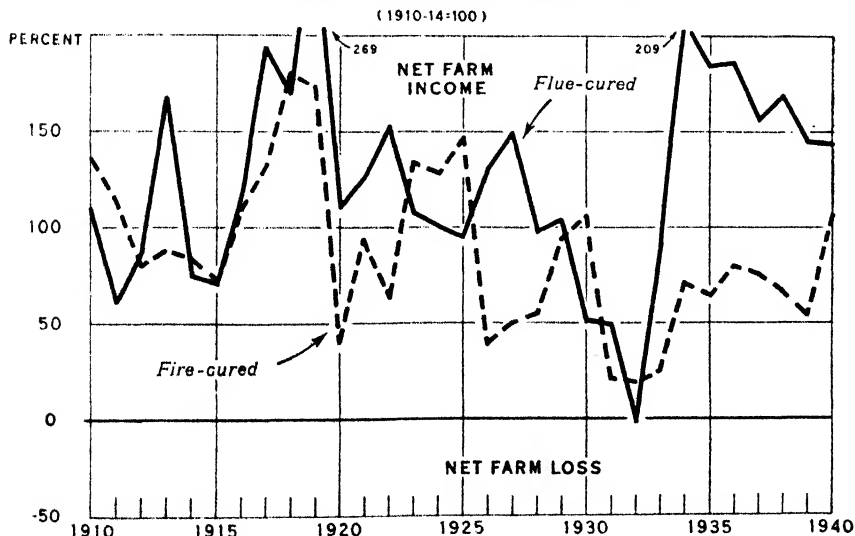
remained about the same; however, it has been applied to smaller acreages.

THERE is little difference in the size of farm of the typical producer of fire-cured or flue-cured tobacco. (See accompanying table.) Practically no change in size of farm has occurred since 1910. However, producers of fire-cured tobacco, because of a declining market and lower tobacco prices, have increased production of feed crops and livestock. Producers of flue-cured tobacco have kept their crop and livestock organization about unchanged.

The purchasing power of net farm income has been considerably lower for fire-cured than for flue-cured producers. For the former the index has been below 100 in 20 out of the last 31 years; since 1926 it has averaged only 62 and has reached 100 in only 2 years (1930 and 1940). In contrast, the index of purchasing power of producers of flue-cured tobacco has been below 100 in only 10 years during the past 31 and since 1926 has averaged 124.

WYLLIE D. GOODSSELL.

INDICES OF PURCHASING POWER OF NET FARM INCOME OF TYPICAL TOBACCO FARMS, VIRGINIA, 1910-40



New Products for Old

Crops

AS the need for planned agricultural production grows more evident day by day the role of plant research becomes clearer. Discoveries of the past have cut costs of production and improved the quality of almost everything we eat. Research also promotes stabilized production, which is vital to planned production. The best laid plans may fall far short of the mark if a crop such as wheat, for instance, is ravaged by a widespread epidemic of rust. In recent years yields of spring wheat have fluctuated rather widely because of rust.

Plant breeders have worked for years to overcome the disastrous effects of wheat rust. A succession of improved varieties has been the result. The most successful so far is Thatcher, a spring wheat developed cooperatively by the Minnesota Agricultural Experiment Station and the Bureau of Plant Industry. Because Thatcher demonstrated its superior rust resistance in 1935 and 1937—when rust damaged other varieties—it is now planted widely. In 1940, when weather was again favorable for rust in certain areas it undoubtedly prevented serious losses.

RIGHT now corn is in the news, because it is the key to expanding livestock production. The recent action of the Department in encouraging greater corn production this year calls attention to the tremendous advances made by State and Federal plant breeders in the development of hybrid corn. Because it produces from 15 to 20 percent greater yields than open-pollinated varieties, hybrid corn requires fewer acres, less labor, and less capital investment to produce our national requirements. It is also more tolerant to certain diseases and insect

pests. It withstands more unfavorable climatic conditions and other natural hazards, with the result that farmers who grow it are more certain of a crop. Approximately 80 percent of the corn acreage of Iowa and Illinois was planted to hybrids in 1940.

In the field of fruits and vegetables recent work by the Bureau has developed new and superior varieties of apples, peaches, pears, strawberries, blueberries, potatoes, beans, cabbage, and tomatoes. The new Pan-America tomato is of special interest now because it combines the excellent quality of our own Marglobe with unusual resistance to wilt, inherited from its South American ancestor, a wild Peruvian relative of the tomato. One of the new potatoes combines disease resistance and insect resistance, with the promise of large savings to growers because of the reduced number of sprays necessary.

Plant breeders of the past have been so hard pressed by threatening diseases and other natural hazards that they have not had much time to speculate on the food value of their creations. Of course they have kept in mind such objectives as appearance, taste and keeping quality. But the more subtle values that influence nutrition have not, until recently, received special attention.

THE present interest in nutrition, greatly stimulated by the national defense program, finds science several jumps ahead of the general public. In November 1939, the Department of Agriculture announced a new Bankhead-Jones research project designed to discover ways of increasing the nutritional value of foodstuffs produced on farms in the United States. The technical phases of the work are centered at Cornell University where a special laboratory has been erected,

but the objectives are Nation-wide, and the studies will cover the entire country. The object is to discover the relationships between soils and plants, and animal and human nutrition. Already the physical plant is in operation and several studies are in progress.

We already have a number of interesting clues in this field and our State and Federal research men are reporting new ones every few weeks. Orange trees in Florida announce a deficiency of magnesium in the soil by a characteristic mottling of their leaves, known as "Frenching." Oranges from such trees are low in vitamin C. As soon as the magnesium deficiency is corrected the vitamin content of the fruit becomes normal. Our plant breeders report that some of the new strains of sweetpotatoes have more than the usual quantity of vitamin A; some of their new cabbages are high in vitamin C.

THERE are other facts about plants that present a challenge to our research men. We know that plants in some areas develop abnormally because of certain mineral deficiencies in the soil. We know also that livestock fed entirely on plants grown in these areas suffer from the same deficiencies. There is every reason to believe that the same is true with people. Some varieties of a plant furnish more of a valuable nutritive element than other varieties of the same plant. Again, a plant harvested at one stage of development will be richer in certain nutrients than if it were harvested at another stage. But what about the effect of climate, cultural practices, intensity of sunlight, methods of harvesting, handling and storage? The Bureau of Plant Industry is out to find the answers to these questions in terms of human nutrition.

ERNEST G. MOORE,
Bureau of Plant Industry.

United States: Exports and Imports of Specified Agricultural Commodities, September-May 1939-40 and 1940-41 and May 1940 and 1941¹

Commodities	Unit	September-May		May	
		1939-40	1940-41	1940	1941
Exports:					
Pork:		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Thousands*</i>
Cured pork ²	Lb.	42,381	9,913	1,495	1,026
Other pork ³	Lb.	67,780	17,791	2,280	2,491
Total pork	Lb.	110,161	27,704	3,775	3,517
Lard, including neutral	Lb.	195,921	128,582	14,889	10,697
Wheat, including flour	Bu.	36,234	31,284	2,239	4,572
Apples, fresh ⁴	Bu.	2,796	738	79	46
Pears, fresh	Lb.	64,455	14,725	427	152
Tobacco, leaf	Lb.	254,377	122,070	30,087	22,427
Cotton, excluding linters (500 lb.)	Bale	5,996	963	224	77
Imports:					
Cattle	No.	505	584	87	72
Beef, canned, including corned	Lb.	62,494	48,431	9,080	9,343
Hides and skins ⁵	Lb.	241,803	359,463	23,662	55,778
Barley malt	Lb.	49,416	28,604	4,327	4,119
Sugar, cane (2,000 lb.)	Ton.	2,371	2,620	301	421
Flaxseed	Bu.	10,056	9,043	1,434	1,177
Tobacco, leaf	Lb.	46,393	48,966	5,858	5,625
Wool, excl. free in bond for use in carpets, etc.	Lb.	139,678	391,904	10,222	57,241

¹ Corrected to July 17, 1941.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled or salted, and canned pork.

⁴ Includes baskets, boxes, and barrels in terms of bushels.

⁵ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records, Bureau of Foreign and Domestic Commerce.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	Wholesale prices of all commodities ⁴	(1910-14=100)			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in —				
					Living	Production	Living and production		
1925	91	98	101	151	164	147	157	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	158	147	153	180	281
1930	91	88	96	126	148	140	145	167	277
1931	75	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	75	96	109	108	109	85	187
1934	75	61	77	109	122	125	123	95	178
1935	87	69	79	117	124	126	126	103	180
1936	103	80	80	118	122	126	124	111	182
1937	113	94	83	126	128	135	130	126	187
1938	88	73	81	115	122	124	122	125	186
1939	108	84	80	113	120	122	121	123	160
1940	122	95	81	115	121	124	123	126	160
1940—July	121	93	81	113	—	—	122	129	—
August	121	96	81	113	—	—	122	—	—
September	125	99	81	114	121	123	122	—	—
October	129	101	81	115	—	—	122	129	—
November	133	104	81	116	—	—	122	—	—
December	139	108	81	117	122	125	123	—	—
1941—January	140	111	81	118	—	—	123	124	—
February	141	111	81	118	—	—	123	—	—
March	143	113	82	119	124	125	124	—	—
April	140	113	82	121	—	—	124	138	—
May	150	125	83	124	—	—	125	—	—
June	166	133	84	127	—	—	126	—	—
July ⁷	162	—	—	129	—	—	—	160	—

Year and month	Index of prices received by farmers (August 1909–July 1914=100)								Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	140	153	163	156	99
1926	181	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	153	149	95
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	69	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	85	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1940	85	81	79	114	108	113	96	98	80
1940—July	78	80	89	98	110	106	88	95	78
August	76	77	79	107	110	109	90	96	79
September	77	76	73	114	114	111	104	97	80
October	80	78	79	99	112	116	112	99	81
November	83	79	71	98	112	121	120	99	81
December	81	79	75	93	111	128	122	101	82
1941—January	84	80	78	117	130	121	100	104	85
February	81	80	80	156	130	118	90	103	84
March	84	82	83	134	129	118	90	103	83
April	90	88	89	161	137	121	104	110	89
May	93	98	89	146	138	124	107	112	90
June	96	107	97	146	144	126	118	118	94
July	98	121	93	130	154	132	127	125	97

¹ Federal Reserve Board, adjusted for seasonal variation.

² Adjusted for seasonal variation. Revised April 1941.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1925=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909–July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

FARM PROGRAMS FOR 1942

THE

AGRICULTURAL

SITUATION

DECEMBER 1941

A Brief Summary of Economic Conditions

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AN AGRICULTURAL PROGRAM of increased food production; of continuing soil conservation practices and payments to producers of wheat, cotton, tobacco and other crops; and of financial aid to low-income farmers is being mapped out for 1942. The program seeks to achieve and maintain parity prices for the farm products of commercial producers, and to improve the economic and social condition of the millions of small farmers who are benefiting least from the gains in prices of farm products during the past year. For many small farmers the problem is not to increase the production of milk, eggs, meats, and vegetables; the problem for them is to be able to produce for the first time these commodities for their own use—to become self-sufficing in food production and household economy.

* * * Farmers by and large go into the winter with continuing good promise of improved consumer demand for farm products, and a relatively high level of prices and income. Total cash farm income has been estimated at 11.2 billion dollars for 1941, compared with 9.1 billions in 1940, and with 8.7 billions in 1939. Largest income of record was 14.6 billion dollars in 1919.

Commodity Reviews

PRODUCTION: Record

FARMERS produced this year a high record volume of food. Commitments now being made in the Food for Freedom campaign call for a further expansion in 1942 to meet expanding domestic and export requirements. Both acreages and yields of many important food and feed crops were larger this year than last; the production of milk and manufactured dairy products was the largest on record; the production of meats set a new high total. Toward year's end the production of eggs was making new seasonal high records.

Cotton was a comparatively small crop in 1941, totaling 11,020,000 bales (November estimate), compared with 12,566,000 bales in 1940, and with 13,246,000 bales average during the 10 years 1930-39. Other crops produced in smaller volume this year than last include oats, peanuts, potatoes, tobacco, sugar beets, pears, and pecans. The corn crop, at 2,675,373,000 bushels (November estimate), was the largest in 9 years.

By and large, the farm plant appears in good physical condition—drought areas in the East excepted—and with good weather during the coming year, it is expected that the 1942 food production goals will be attained, and possibly exceeded. Early returns in the Food for Freedom campaign indicate wholehearted cooperation by farmers in producing the quantities needed by us and for export to Britain.

Government agencies are making every effort to see that farmers have the equipment needed for the large volume of production sought during the coming year. The farm labor situation is being attacked on a broad front of Federal, State, and local co-operation. The 1942 volume of production will cost more in money and

farm family labor than in years past, but total cash income from marketings and Government payments will be the largest in more than 20 years.

PRICES: Up

Prices received by farmers in 1941 averaged 22 percent higher than in 1940. Prices advanced in response to increased consumer buying power, higher commodity loans to producers at 85 percent of parity, and increased Government buying of commodities for domestic consumption and Lend-Lease export. Prices of all farm commodities ended the year higher than at the beginning, largest gains being recorded for cotton and cottonseed, chickens and eggs, and truck crops. Forecast is for a further but moderate rise in the general level of prices of farm products in 1942.

Prices paid by farmers (including interest and taxes, but not including farm labor) averaged 4 percent higher than in 1940, but a rise of larger proportions has been forecast for 1942. Prices paid at year's end (1941) were rising more than prices received, thereby lessening the purchasing power of farm products. Costs of farm production are higher in practically all categories—farm labor, farm equipment, fertilizer materials, and building supplies. Farm wages rose nearly 30 percent during 1941.

For 1941 as a whole the average of prices received by farmers has been tentatively estimated at 120 percent of the 1910-14 average, and the average of prices paid (not including interest, taxes, and farm wages) at 130 percent. This yielded a purchasing power of 92 percent of pre-World War I, as contrasted with 80 in 1940, and with 77 in 1939. Highest in recent years was 93 in 1937.

Including interest and taxes, but not including farm wages, the index of

prices paid was 133 in 1941, as compared with 128 in 1940. Ratio of prices received to prices paid, interest and taxes payable was 90 for 1941, as compared with 77 in 1940, and with 73 in 1939.

Index Numbers of Prices Received and Paid by Farmers

1910-14=100

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
November.....	99	122	81
December.....	101	123	82
1941			
January.....	104	123	85
February.....	103	123	84
March.....	103	124	83
April.....	110	124	89
May.....	112	125	90
June.....	118	125	92
July.....	125	130	97
August.....	131	133	98
September.....	139	136	102
October.....	139	139	100
November.....	135	141	96

¹ Ratio of prices received to prices paid.

² Revised.

TAXES: Up

Farmers will pay substantially higher taxes in 1942, the result principally of increased Federal levies, since State and local taxes probably will show only moderate increases. A continued rise in the general level of prices would be followed by upward revisions of State and local taxes, but no great increases in these taxes are expected short of an extremely inflationary situation.

Federal tax payments by farmers will increase sharply with the coming into effect of the Revenue Act of 1941. The one item in this act with the greatest direct effect on farmers probably is the motor vehicle use tax which will cost farmers some \$25,000,000 per year. The lowering of exemptions for the personal income tax will greatly increase the number of farmers making Federal income tax returns, and together with the raising of rates, will increase the amount of taxes paid by farmers. Further increases in Federal tax levies that will

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States.

Product	5-year average, August 1909-July 1914	November 1910-14	November 1940	October 1941	November 1941	Parity price November 1941
Cotton, lb.....	12.4	12.1	9.38	16.55	15.78	17.73
Corn, bu.....	64.2	59.4	* 56.8	64.9	63.7	91.8
Wheat, bu.....	58.4	57.3	72.5	91.0	93.4	126.4
Hay, ton.....	11.87	11.89	7.25	8.34	8.71	16.97
Potatoes, bu. ¹	69.7	61.4	52.4	67.2	77.4	100.1
Oats, bu.....	39.9	38.2	31.7	38.9	41.1	57.1
Rice, bu.....	81.3	-----	72.2	96.7	120.4	116.3
Peanuts, lb.....	4.8	4.5	3.24	4.41	4.61	-----
Tobacco:						
Flue-cured, types 11-14, lb. ²	22.9	-----	14.7	32.8	24.2	6.9
Fire-cured, types 21-24, lb. ¹	13.6	-----	-----	-----	-----	26.9
Maryland, type 32, lb. ¹	22.9	-----	13.0	32.0	25.0	12.0
Cigar binder, types 51-55 lb. ¹	19.9	-----	-----	-----	23.4	20.2
Apples, bu.....	.96	.80	.75	.87	.98	17.5
Beef cattle, cwt.....	5.21	5.01	* 7.88	9.18	8.85	1.37
Hogs, cwt.....	7.22	6.96	5.62	10.08	9.66	7.45
Chickens, lb.....	11.4	10.8	13.1	16.0	15.5	10.32
Eggs, doz.....	21.5	27.8	26.2	31.8	35.5	16.3
Butterfat, lb.....	26.3	28.5	* 31.0	36.9	36.7	43.3
Wool, lb.....	18.3	18.5	31.5	36.3	36.1	39.9
Veal calves, cwt.....	6.75	6.74	9.06	11.14	10.79	26.2
Lambs, cwt.....	5.87	5.31	7.78	9.66	9.48	9.65

¹ Post-war base.

² Base price crop years 1934-38.

³ Revised.

⁴ Adjusted for seasonality

affect farmers may be expected in subsequent years as the defense program develops.

INCOME: Increase

Farmers in 1941 had the best cash income in years. Total from marketings and Government payments was 11.2 billion dollars, as compared with 9.1 billions in 1940. Total was about 100 million dollars less than in 1929, but nearly 400 million above the average for the period 1924-29. Itemization of 1941 income is not yet available, but it seemed near year's end that income from crops would show a larger gain over 1940 than returns from livestock and livestock products.

A marked increase in the size of the 1941 wheat crop, together with substantially higher prices, resulted in the largest income from wheat since 1929. Cotton and cottonseed yielded farmers more than 1 billion dollars for the first time since 1929. Income from most other farm crops, particularly truck crops, soybeans, rice, and several of the fruit crops showed substantial increases in 1941 over 1940.

Returns from livestock and livestock products were about 25 percent larger than in 1940, and the largest since 1929. Income from meat animals recorded the largest percentage increase over 1940, but the increase from poultry and eggs was nearly as large. Income from dairy products also was substantially larger than in 1940, the total approaching the 1929 figure of 1.8 billion dollars.

A cash farm income of 13 billion dollars has been forecast for 1942, predicated on continuing improvement in the demand for farm products and increased volume of production under the Food-for-Freedom program. Income from grains may not be much larger than in 1941, but income from fruits and vegetables and from livestock products is expected to increase as consumer buying power continues to rise and larger quantities of com-

modities are bought by the Government for Lend-Lease export.

CONSERVATION: 1942

In 1942, as in former years, farmers may earn two types of payments under the Agricultural Conservation Program: one for planting soil-depleting crops within special allotments; the other, for carrying out soil-building practices. Following are the payment rates for 1942, based on normal yield of allotted acreages, as compared with 1941 rates:

Crop	1941	1942
Corn (commercial area) bushel.....	9¢	8¢
Cotton, pound.....	1.37¢	1.25¢
Wheat, bushel.....	8¢	10.5¢
Rice, 100 pounds.....	5.5¢	3¢
Peanuts, ton.....	\$2.25	\$1.45
Potatoes (commercial) bushel.....	2.3¢	2¢
Flue-cured tobacco, pound.....	0.8¢	0.7¢
Burley tobacco, pound.....	0.8¢	0.7¢
Fire-cured tobacco, pound.....	1.5¢	1.4¢
Dark air-cured tobacco, pound.....	1.0¢	0.9¢
Virginia sun-cured tobacco, pound.....	0.8¢	0.7¢
Pennsylvania tobacco Type 41, pound.....	0.5¢	0.4¢
Cigar filler and binder tobacco (other than types 41 and 45) pound.....	0.8¢	0.7¢
Georgia-Florida tobacco Type 62, pound.....	1.0¢	0.9¢

DAIRY: Production Up

Milk production continues to set new seasonal high records. The total for 1941 was the largest on record—approximately 117 billion pounds. A further increase—to 125 billion pounds—is sought for 1942 under the Food for Freedom program. It is estimated there will be nearly 26 million cows on farms in 1942, but even this large number must be fed heavier quantities of feed grains and concentrates to attain the 1942 production goals. Pastures and weather conditions also must be good in order to reach the 1942 goals.

Production of milk and of most manufactured dairy products is expected to average larger than a year earlier

during the next 6 months. Butter production, however, may be about the same or somewhat smaller than in the corresponding months of 1940-41. Exports of cheese, evaporated milk, and dry skim milk will continue unusually large. Storage stocks of butter and cheese probably will continue larger than a year earlier but manufacturers' stocks of evaporated milk may continue smaller.

Forecast in late November was that prices of cheese and evaporated milk may be relatively steady during the next 3 or 4 months. Butter prices usually decline from December to June. The butterfat-feed price ratios may be somewhat less favorable for milk producers during this period as contrasted with a year earlier, but it is believed that the ratio of feed prices to prices paid by condenseries for milk may be more favorable.

FATS, OILS: Increase

Factory production of fats and oils from domestic materials totaled about 6.0 billion pounds during the first 9 months of 1941, as contrasted with 5.3 billion pounds in the like period of 1940. Production from imported materials was only slightly larger than a year earlier, with increased output of castor oil and linseed oil being nearly offset by reduced production of coconut and babassu oils. Despite the gains in output, factory and warehouse stocks of primary fats and oils at the end of the period were more than a quarter billion pounds smaller than a year earlier.

The extraordinary demand for fats and oils is reflected in higher prices this year than last. In some cases—as peanut, soybean, cottonseed, and corn oils—prices have been more than double those of a year earlier. A continuing high level of demand for edible and industrial oils has been forecast for 1942. Large quantities of lard will be bought by the Federal Government for Lend-Lease export. It has

been estimated that total requirements of fats and oils for all purposes may be at least 11.2 billion pounds this season.

A 1942 peanut marketing quota of 1,255,800,000 pounds was proclaimed November 7 by the Secretary of Agriculture, but this quota applies only to peanuts harvested for the edible trade. The 1942 acreage allotment is 1,610,000 acres, the same as in 1941. In addition, production goals for 1942 call for approximately 1,900,000 acres of peanuts to be harvested for oil. Growers also are being encouraged to increase the acreage of peanuts to be "hogged off."

EGGS: Increase

Production of eggs has been setting new high records this season. As of November 1, total egg production was about 9 percent larger than a year earlier. Receipts at midwest primary markets have been unusually large, but receipts at terminal markets have been a little smaller than a year ago. Many of the eggs were going to egg-breaking and drying plants. Storage withdrawals of eggs recently have been about as large as at the same time last year.

The outlook for coming months is that (1) with favorable weather, egg production will continue even larger than the record output of a year earlier; (2) the number of layers on farms January 1 will be about 10 percent larger than a year earlier (a larger number of pullets also will be available for addition to laying flocks after the first of the year); (3) the feed-egg ratio is expected to continue favorable for egg production.

It is expected that the Department of Agriculture will buy 500 million dozen eggs for Lend-Lease purposes in 1942. This is nearly 17 million cases. Even so, supplies of eggs for domestic consumption in 1942 will be as large as the average in recent years—possibly larger. Prices received by farmers for eggs are expected to average somewhat higher in 1942 than in 1941.

FEED: Plentiful

The supply of feed grains as of October 1 was estimated at 120 million tons—largest in more than 20 years. This was about 5 million tons more than on the same date last year, and 4 million tons larger than the big 1932 supply. Assuming an increase of about 5 percent in the number of grain-consuming livestock during 1941, the October 1 supply of feed grains per animal unit is slightly smaller than in 1940, but 18 percent above the 1928–32 average.

Prices of all feeds are considerably higher than at this time last year, although corn has advanced relatively less than other feeds. The seasonally adjusted butterfat-feed and feed-egg price ratios in late November were less favorable to producers of dairy and poultry products than in mid-summer, but the United States hog-corn price ratio continues well above average.

The Commodity Credit Corporation announced in late November it would make loans on 1941 corn in the commercial area at rates averaging 74.8 cents per bushel. This compares with a flat rate of 61 cents per bushel in 1940. It was announced also that the price of corn sold by Commodity Credit would be revised—effective immediately—to the new loan rates.

HOGS: Increase

Hog production is increasing. Total for 1941 was larger than in 1940, and a further increase is expected in 1942. Production next year probably will be the largest on record—in response to a favorable hog-corn price ratio as a result of increased domestic consumer demand and Government Food for Defense buying. Government purchases of pork and lard totaled nearly 700 million pounds from March through November 15 this year.

The 1941 spring crop totaled approximately 50 million pigs, or about the

same as in the spring of 1940. But the 1941 fall crop was considerably larger than the 1940 fall crop, as prices rose to make pig production profitable. In late fall a year ago, farmers were averaging \$6 per cwt. for hogs; this fall the average has been about \$10.

A continuing favorable hog-corn price ratio has been forecast for 1942, and it is expected that the 1942 spring pig crop will be 10 to 15 percent larger than the 1941 spring crop. An increase of this proportion will be needed to reach the hog-slaughter goals set up by the Federal Government for 1942. These goals call for a total slaughter of 79 million hogs in 1942 as compared with 72 million estimated for 1941.

CATTLE: Supply

For several months past the Government livestock specialists have been urging cattlemen to increase the marketings of cattle and calves in 1942. Reason is that numbers of cattle and calves are approaching peak figures, that increased supplies of meats are needed for us and for Britain in 1942, and that increased marketings in 1942 will yield better prices than heavier marketings in subsequent years. National goals call for the slaughter of 28 million cattle and calves in 1942, as contrasted with about 25 million estimated for 1941.

Recent Government reports indicate that fewer cattle will be on feed this winter than last. Does this mean that the 1942 slaughter goals will not be reached? That instead, there will be a further increase in the numbers of cattle and calves on farms and ranches? At the moment, the Government livestock specialists have not the answers to these questions. Practical certainty is, however, that marketings of well-finished cattle will be smaller than in 1941.

The situation as to cattle on feed indicates the necessity for heavier marketings of the lower grades of cattle in order to meet the 1942 slaughter

goals. Close culling of low-quality cows and heifers from beef herds would contribute much to yielding the desired increase in meat production.

FRUITS: Higher

Total production and prices of fruits are higher this season than last. The citrus crop is smaller, but this is more than offset by increased production of deciduous fruits. Production of all fruits combined is about 5 percent larger this season than last. Prices have been helped by the improved consumer demand this season, and by heavier Government purchases of fruits.

The commercial apple crop has been estimated at 126.1 million bushels, compared with 114.4 million in 1940, and with 125.3 million bushels average during the preceding 5 years. Improved consumer demand and increased Government purchases have outweighed price-depressants such as the larger crop and reduced exports.

Production of pears has been estimated at 30.8 million bushels, as compared with 31.6 million in 1940. Prices are higher this year than last. * * * Production of winter and early spring oranges has been estimated at 54.7 million boxes, as compared with 54.1 million boxes a year earlier; grapefruit 40.3 million boxes as compared with 43.0 million; lemons 14.6 million as compared with 17.1 million.

Market prices of Florida oranges and grapefruit are higher this season than last.

TRUCK CROPS: Reduced

Smaller market supplies and larger consumer demand have resulted in sharply higher prices of truck crops this season than last. Most of the late 1941 vegetables had been harvested by mid-November and a few storable commodities moved under cover. * * * Early crops grown in the South are moving to market. Larger acreages probably will be grown this winter and next spring, but of course

yields will be dependent upon the usual widely variable and unpredictable weather in this region.

Smaller truck crops this fall than last were snap beans, kale, and spinach; larger crops were cabbage, cucumbers, eggplant, tomatoes, and shallots. Output of carrots, cauliflower, celery, lettuce, and green peppers was about the same as in 1940. Truck crop prices are expected to continue on a relatively high level this winter.

Prices of potatoes are higher this season than last, as a result of the smaller fall crop and continuing high level of consumer demand. Late summer and early fall supplies were relatively heavy, and prices declined; but the late crop, estimated at 297 million bushels, was about 16 million bushels smaller than in 1940, and 1 million less than the average for the preceding 10 years.

Sweetpotatoes are a larger crop this season—71 million bushels, as compared with 62 million in 1940.

COTTON: Lower

Cotton was selling above parity for a while this fall, but prices subsequently declined, and in mid-November the average to farmers was 15.78 cents per pound. The average in mid-November last year was 9.38 cents. Price depressants this fall included the large marketable supply of cotton outside loan stocks, and an unfavorable turn of political and military conditions abroad. These more than outweighed the continuing high level of domestic mill consumption.

The November crop report reduced the 1941 crop by some 41,000 bales, indicating a total outturn of 11,020,000 bales for the year. Production in 1940 totaled 12,566,000 bales; in 1939 the total was 11,817,000 bales. The total 1941-42 supply of cotton—production plus carry-over—is double our domestic requirements, even at the current high level of domestic consumption. Principal price support is the Government loan at 85 percent of parity.

Considerably less cotton has gone into Government loan stocks this year, since the crop is smaller and the higher level of prices has induced immediate marketing by growers. Government loan stocks totaled 6.9 million bales as of November 22, as compared with 10.4 million bales at the same time last year.

WOOL: High Priced

Domestic wools have been selling at Boston at highest prices in more than a decade. Prices advanced following invitations for bids on large additional quantities of wool cloth for military use. Mill consumption of apparel wool had already reached a new high total of more than 90 million pounds, grease basis, in September. It is expected that consumption will continue close to record levels during the early months of 1942.

United States dealers and manufacturers are holding unusually large stocks of raw wool this fall, but the supply is not especially large in relation to the current high rate of mill consumption. For the same reason, it is likely that the United States will continue to import near-record quantities of wool in 1941-42, provided shipping space is available. Imports (for consumption) totaled 473 million pounds in the year ended June 1941. This was 3 times the quantity imported in 1939-40. It was the largest total on record. More than half the total imports came from Argentina.

A reciprocal trade agreement with Argentina went into effect November 15, providing for reductions of 11 or 12 cents a pound in the tariff rate on certain coarse wools grading not finer than 44's. Domestic production on these types is only about 1 percent of total United States production.

SHEEP, LAMBS: Increase

Reports indicate that about as many lambs will be on feed this winter as last. Lamb feeding operations are likely to be smaller than a year earlier in all of

the Corn Belt States east of the Mississippi River, and in Minnesota and Iowa. But the number fed in Missouri and in the States west of the Missouri River will be larger. The total number fed in the 11 Western States may differ little from the number fed in these States last season, a rather sharp increase in Colorado offsetting decreases expected in other States.

Some increase in feeding is probable in Texas and Oklahoma. Despite the 8-percent increase in the 1941 Texas lamb crop, shipments from Texas were much smaller this fall than last. Because of the favorable level of wool prices now prevailing, the number of Texas lambs held over for market next spring as shorn yearlings may be larger than usual.

FLAXSEED: Trade Agreement

A new trade agreement with Argentina went into effect November 15 cutting in half the duty on flaxseed and duties and excise taxes on imports of oleo oil and stearine, tallow, neatsfoot oil, and edible sunflower oil. Except for flaxseed, the United States normally does not import any of these commodities in appreciable quantities. But with relatively high prices for fats and oils in the United States, and with demand increasing, imports probably will be stimulated if adequate shipping space is available.

The duty on flaxseed was reduced to 32.5 cents per bushel, but provision was made to increase the rate to 50 cents after the present "abnormal situation" is over. The duty and excise tax reductions in the case of sunflower oil may be canceled on 6-months' notice after conclusion of the Anglo-German conflict. The price of flaxseed declined fairly sharply in mid-October following announcement of the agreement. But with a Government loan available and with continuing high costs for imports, no further marked decline in flaxseed prices is considered as likely this season.

FRANK GEORGE.

AGRICULTURAL PROGRAMS FOR 1942

AGRICULTURAL action programs are advancing on a new front. Main objective is the production goals set up for 1942 in a Food for Freedom campaign designed to increase the production of protective foods for us, for Lend-Lease export, and for the building of food stockpiles. Food is expected to "win the War, and write the peace!" The food production goals will be reached—possibly exceeded—in 1942.

Buttressing the Food for Freedom campaign are the continuing Governmental efforts at conservation of the soil, economic security for low-income farmers, commodity loans to support prices near parity levels, farm credit on production and on mortgage debt, the insurance of crops against natural hazards, the purchase and distribution of foods to improve the nutrition and health of low-income people, the marketing of products under agreement between producers and processors.

The accompanying group of articles sets forth some of the highlights of these various agricultural programs—for 1942.—Ed.

Food for Freedom

IN recent weeks, 135,000 AAA farmer committeemen, representing every agricultural community in the United States, have met and talked with their neighbors about 1942 farm plans. By now, more than 6 million farmers have indicated to the U. S. D. A. Defense Boards which have been set up in every State and county exactly what they plan to do toward reaching the Food for Freedom production goals for 1942. The task of tabulating these returns and relating them to the production needs for 1942 is now under way.

The work in the Food for Freedom production campaign is high-lighted against a background of consistent effectiveness of the Federal Farm Program in strengthening American agriculture and the Nation. The AAA program, from the beginning, has worked toward a goal of balanced abundance—providing a means of adjustment downward of surplus crops and adjustment upward of crops for which there have been adequate markets. Throughout the present

emergency the provisions of the AAA program have accordingly been geared to fit the changing needs.

THE provisions of the 1942 program reflect the demands of national defense. The substitution in 1942 of a soil-conserving goal for the total soil-depleting allotment is an important example. One of the reasons for this action is to make way for increased production of milk, eggs and the other protective foods. At the same time the use of the soil-conserving acreage goal for each farm increases the emphasis on conservation, continuing and expanding the progress toward stronger soil resources on America's farms.

This new provision incorporated into the 1942 program, added to the soil-building practices, is a safeguard against a repetition of the grassland plow-up that took place during and after World War I. It is further bolstered by the orderly adjustment that is now possible to meet the needs of the present emergency and by the orderly management of our surplus supplies. As in the past, the acreage allotments for the special crops such as wheat and cotton continue to play

an important role in preventing undue waste of soil and labor that would otherwise go into the production of excessive surpluses.

In many cases, measures instituted to attain peacetime objectives are now found to serve urgent defense needs. The potential value of the Ever-Normal Granary reserves to national defense was obvious from the start of the emergency. Now it must be recognized that without these reserves the Food for Freedom program, which seeks to convert the grain of the Ever-Normal Granary into food, would find impossible the attainment of its goals in the time at hand.

OTHER measures in the 1942 program, showing the variation in the type of defense problem being met, include the leguminous winter cover crop seed program. In 1938 the AAA began a program for encouraging domestic production of leguminous winter cover crop seed. Up to that time the bulk of such seed had come from central Europe. With the outbreak of World War II, this source of seed was abruptly and completely cut off. To meet this problem the domestic seed program was stepped up. Now as the defense program has gained momentum, the seed program has taken on new importance, for the reason that legumes inject nitrogen into the soil, and by using legume cover crops farmers are able to release for defense needs nitrogen normally put into commercial fertilizers. The 1942 program calls for double the quantity of legume seed produced hitherto.

Another example is the steps taken to increase the production of fats and oils. The 1942 program provides encouragement of production of soybeans and peanuts for oil. No acreage allotments will apply to either crop, and in the case of soybeans a loan is being offered on the 1941 crop. These measures are in response to a shortage of fats and oils which we are not now receiving from other sources in usual

quantities, primarily because of shipping shortages. Further reductions in imports of fats and oils seem likely in 1942. The difference must be made up through increased production of oil crops grown at home, such as soybeans and peanuts.

INSEPARABLE from the problems of production is the long-standing problem of farm income, and now during the national emergency the AAA measures that deal with this phase of the agricultural economy take on an added significance. The Food for Freedom phase of the program gives assurance to producers of specified commodities for which increased production is asked that prices will be maintained at least up to 85 percent of parity through 1942. At the same time the AAA job of helping farmers maintain fair incomes from the crops cut off from export trade, continues a very real job as the new program year approaches. Government measures—acreage allotments, marketing quotas and commodity loans—which served to maintain prices of surplus crops in 1941 have just as big a part to play in 1942.

As the national economy directs more and more effort toward strictly defense work, another problem presents itself: the threat of inflation. Inflation is the result of a scarcity of goods at a time when buying power is abundant. This being so, agriculture's Ever-Normal Granary reserves and its 1942 production program constitute the greatest contribution made by any industry against the threat of scarcity and inflated prices.

THE Nation-wide Food for Freedom canvass this fall has enabled the individual farmer to plan his 1942 production operations in harmony with all other farmers throughout the country. The production goals provide all with a guide as to how they may make their greatest contribution. But a greater responsibility looms ahead. That is the "follow-up"—to

give farmers all possible help in meeting goals. If American agriculture were operating under "business as usual" conditions, there would be no need for such a follow-up. But in 1942 farmers will be faced with handicaps, some of them already apparent, and others which may develop.

There is the problem of getting the necessary farm machinery. Steel and other vital materials that normally would go into the production of tractors and plows and milking machines are going to be needed even more urgently in arms production. The probable shortage, or at least the tightening up, of farm labor in some areas is another problem that has bearing on whether or not farmers will be able to reach the production goals in 1942.

In the case of both these problems—possible shortages of labor and equipment—the AAA committeeman shares a responsibility with his State and county USDA Defense Board and with other department agencies in position to help. Already the Defense Boards have called upon the committeemen to help press the survey

of farm machinery repair needs this winter. The object is to get farmers to do all they can with the machinery they already have, as well as to find out just what repairs and new machinery are essential.

MANY of the handicaps to 1942 production on the scale desired will have to be met by extended effort, more efficient operations, and improved methods. In all this, the committeemen, able as they are to watch developments from their own farms, are in a position to iron out or call attention to many local problems. At the same time, however, the follow-up work calls for diligent effort by all agencies. No matter how foreboding might be the array of individual problems to be met in 1942, however, the great challenge before American agriculture next year as in years to come is whether or not the jobs can be done quickly and efficiently by the democratic processes as symbolized by the farmer-elected committees.

R. M. EVANS, *Administrator,
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Defense Relations

EXCEPT for the "spotty" and temporary shortages of farm labor and bale ties and farm hardware, agriculture was riding on a defense-borne boom in 1941. Both prices and consumer demands for agricultural commodities were on the upgrade, and the 1942 agricultural production goals indicate a continuing and growing demand for farm products.

But, as the new defense factories authorized in the fall of 1940 and winter of 1941 began to go into operation, the shortages which some defense officials had predicted began to appear. Tanks, airplanes, ships, and ammunition began eating up enormous quantities of steel, aluminum, copper, zinc, and nickel. Explosives plants began

competing for the supplies of chemicals usually used by agriculture. As the defense needs became increasingly apparent, a new expansion of the industrial defense program was ordered by the President. The new production schedules are considered necessary if the Allies are to assume the offensive, and if Russia is to halt the German drive.

This fall it appeared that the shortages of labor would ease as nondefense industries began to slow down operations because of lack of materials. But now it appears there will be no permanent widespread unemployment due to priorities. The silk workers have practically all been absorbed, and automobile workers will be needed in defense plants soon after they leave their old jobs. The office of Agricultural Defense Relations foresees

widening shortages of manpower and equipment in 1942.

EARLY last summer, the Secretary of Agriculture and the Office of Agricultural Defense Relations began moving to secure priority ratings and allocations for the wide variety of materials needed to produce, process, and store and transport agricultural commodities. The Secretary, at a meeting of Office of Production Management officials, established the philosophy that "food will win the war and write the peace."

Beginning with activities resulting in an allocation of steel last summer to handle the bumper grain crop in storage, OADR has moved steadily to bale ties, farm machinery, fertilizers, insecticides, fungicides, disinfectants, processing machinery, and storage facilities in an effort to keep abreast of the rapidly moving priorities picture. Department interbureau committees spent weeks digging up and analyzing agriculture's metals and chemicals needs. The USDA Defense Boards canvassed the farmers for their anticipated equipment needs in 1942.

SECRETARY WICKARD took Agriculture's case to the highest priority court—the Supply Priorities and Allocations Board—which put its stamp of approval on a farm marketing priority program and turned the problem over to OPM. Agriculture asked for sufficient materials to guarantee production of farm machinery at 107 percent of the 1940 level as a general average. The breakdown by items was based on comparative needs in relation to farm production goals, and some items were listed as high as 200 percent.

The OPM frankly said, that in view of the increase in the armament program there would simply not be enough critical metals to guarantee 107 percent but that it could guarantee approximately 80 percent, exclusive of repair parts and exports. OPM

agreed that an adequate supply of repair and replacement parts should be available.

The Secretary then mobilized the Department and the nation's farmers on an all-out farm equipment repair campaign. Farm hardware and supplies for blacksmith shops are handled through a Warehouse Order, which permits limited purchases by retail establishments and shops from the warehouse. Bale ties are handled directly with the steel mills through the OPM. A separate allocation has been made for milk cans.

WHILE the OPM order drastically restricting construction will definitely curtail the building of large farm structures requiring critical metals, there should be no difficulty in small construction. Lumber, glass, brick, stone, cement, and tile are not under priority control. Except for a few nonagricultural items, such as heavy-duty electric motors, heavy crawler tractors, and certain kinds of water systems, it is believed now that the farmer will not be required to make application for priorities or to obtain priorities certificates to secure necessary supplies.

The supply of chemicals is considerably confused by uncertainty of shipping space. If ships can be secured to bring nitrate from Chile, restrictions on plant nitrogen should not be very severe. But if ships are not available, there may be shortages. We must face the possibility of reduced quantities of sulphuric acid, which will mean less phosphate fertilizer than we would like. The potash supply seems to be adequate. With careful conservation, there should be an adequate supply of insecticides, fumigants, and fungicides.

THERE are not now any accurate, dependable statistics on farm labor requirements or supply, so it is difficult to forecast the farm labor situation for next year. However, Congress has appropriated funds for gathering

farm labor statistics at the request of OADR and a clearer view of the exact farm labor problem should be available in the near future.

The OADR labor program is, generally:

1. Encouraging the Federal Security Agency to strengthen and broaden the Farm Placement Service, and, at the same time, asking farmers to use the service.

2. Encouraging Selective Service to clarify agricultural deferments. OADR has cooperated with Selective Service in preparing a "directive" which Selective Service intends to use as a suggested basis for agricultural deferments.

3. Encouraging WPA, NYA, and CCC to use their training facilities for developing necessary farm skills.

4. Encouraging expansion of the mobile camp program.

AGRICULTURE has also played an important part in selecting the sites for defense plants through membership of the Director of OADR on the OPM Plant Site Board. In this

way, agriculture's interests have been protected insofar as it was possible without direct conflict with the urgencies of the defense program. On many occasions location of huge defense projects in productive agricultural communities was prevented. At the same time agriculture was instrumental in shifting defense plants westward and southward where unemployed rural populations would get the benefit.

To persons familiar with the 1942 production goals, the impact of defense upon farm production is obvious. Agriculture has the job of helping feed our Allies, meeting increased domestic consumer demands, and producing fats and oils necessary to the industrial mobilization. It even reaches down into the field of drugs. Many medical herbs formerly imported must be secured domestically. New uses are constantly being developed for agricultural commodities, hastening the progress of chemurgy.

M. CLIFFORD TOWNSEND,

Director, Office of Agricultural Defense Relations.

Soil Conservation

DECADES ago thousands of American farmers realized their soils were getting thin and unproductive, that new lands were becoming scarce as the years went by. But they didn't know why their soils were eroding, or how the erosion could be controlled.

Then, in 1929, ten erosion experiment stations were established by the Federal Government—outdoor laboratories where soil scientists could study erosion in detail and develop control methods. By 1933, sufficient knowledge had been accumulated to justify establishment of watershed demonstration areas. In these demonstration areas, usually about 25,000 acres in

size, erosion control practices are applied under field conditions.

It became obvious, as a result of this work, that soil erosion is a social problem, that a social mechanism should be developed to deal with it. Government could not expand the intensive demonstration program to cover the entire country, nor could the problem be solved by farmers working as individuals. State laws permitting farmers to organize soil conservation districts were enacted in some states in 1937; today all but 6 of the 48 States have legislation enabling farmers to band together in local erosion control cooperatives. Each district is a unit of local government empowered by law to carry out measures for the conservation of soil and water resources.

SIX hundred soil conservation districts are now in operation embracing a total area of 350 million acres. They include more than 3 million farmers, or about 45 percent of the total farm population of the United States. Upon request, the Soil Conservation Service aids districts in developing operations programs on the land. Service technicians help in making surveys and in developing and carrying out soil conservation plans. The Service also provides equipment, seed and seedlings for erosion control, and where it is practicable furnishes CCC labor to assist in conservation work. By September 15, 1941, assistance of this general type had been extended to 480 districts, representing a total area of 300 million acres in 38 States. During the coming year, such assistance to districts, which are increasing in number, will form a large part of the Soil Conservation Service action program. Field and laboratory research likewise is being pressed.

In addition, the Service is working in 180 demonstration projects in 45 States, Hawaii, and Puerto Rico, where farmers are carrying on intensive erosion-control work under Service supervision. Similar work of a demonstrational nature is performed by more than 306 CCC camps, including 25 drainage camps, under Soil Conservation Service supervision. About 100,000 farmers, representing approximately 36 million acres of land throughout the United States, are cooperating in the camp and project areas. The Service also helps to plan erosion-control programs on scattered demonstration farms in conjunction with the Agricultural Extension Service. Such plans have been made for approximately 40,00 farms in 42 States.

THE Soil Conservation Service is responsible for the acquisition and development phases of the Department of Agriculture's land utilization program. This program aims to relieve

social and economic maladjustments in rural areas by purchasing land unsuited to cultivation and developing it for some use for which it is better adapted, such as forestry, grazing or wildlife. A large acreage of such land has been transferred to State agencies under long-term lease, but approximately 6 million acres, located chiefly in the Great Plains region and used primarily for grazing, are under Soil Conservation Service management. Land purchases during the remainder of this fiscal year will approximate 150 thousand acres. The total area of land acquired since the beginning of this program is approximately 11,500,000 acres.

The water facilities program, authorized by the Pope-Jones Act of 1937, is being carried forward in arid and semiarid sections of 17 Western States by the Bureau of Agricultural Economics, the Farm Security Administration, and the Soil Conservation Service. In these areas the Service is helping farmers and ranchers to build or install facilities such as dams, stock ponds, wells, pumps, and diversion structures. Service technicians help develop conservation and management plans for farm and range lands benefiting from water facilities work. Water facilities program assistance has been extended to some 5,000 families representing approximately 2,905,413 acres of land.

UNDER authority of the Omnibus Flood Control Act of 1936, the Service is collaborating with the Forest Service and the Bureau of Agricultural Economics in a program of upstream run-off retardation. These three agencies have now completed preliminary examinations of 129 major watersheds, and detailed surveys are completed or under way in 50 of them in preparation for actual operations. Work has already begun on a watershed improvement program for the Los Angeles River in California.

This coordinated watershed and channel improvement program represents a new approach to the flood control problem. It recognizes the importance of proper use and protection of the uplands where floods originate. It involves cooperative effort of farmers on the land, cities along the streams, and State and Federal agencies.

The Soil Conservation Service is responsible for the supervision of farm forestry projects in predominantly agricultural areas. In these projects, the Service helps farmers build up their woodlands, both for income production and erosion control. Farmers participating in the program are aided in development of conservation plans for croplands and pastures. So far, 48 farm forestry projects have been established in 36 States.

The 25 CCC camps engaged in farm-drainage work are located in nine States east of the Mississippi. They work in public drainage districts clearing out ditches, repairing drains, and improving existing drainage systems. About 6,200 miles of ditches and 309

miles of tile have been improved to date.

THE foundation for its action work on the land is the Service's comprehensive research program. Problems in soil and water conservation, flood control, farm drainage, and irrigation are being studied in cooperation with State agricultural experiment stations and the Bureau of Agricultural Economics at 127 field stations all over the country. Significant research findings are put into practical use in the operations program, and are made available to other agencies and to the public.

Surveys of agricultural lands to determine the type of soil, amount of slope, degree of erosion, and present use are an essential preliminary to most of the Service's work. Detailed surveys have been completed on approximately 100,000,000 acres, and are under way on 292,000,000 acres more, largely within soil conservation districts.

H. H. BENNETT, *Chief,*
Soil Conservation Service.

Farm Security

IN addition to its regular programs the Farm Security Administration in 1942 will do special work related to National Defense.

The 600,000 low-income families operating farms with rehabilitation and tenant purchase funds will help produce more milk, eggs, pork, and vegetables for America and Britain. The best methods of producing and handling these essential foods have been studied by FSA borrower families in group meetings, and their farm and home plans include provisions for improved home diets as well as increased production for market.

MORE than 14,000 farm families have had to move from their homes on short notice because the

Government has purchased more than 4 million acres of land for proving grounds, maneuver areas, bombing fields, anti-aircraft ranges, and the like. Several thousand more may be affected the same way next year. Displaced families who need it are getting the following help from the Farm Security Administration: (1) Cash grants for subsistence and for actual moving expenses; (2) operating loans to enable them to start farming again; (3) loans to tide them over until they have been paid by the Government for their property; and (4) assistance in finding available acreages in nearby areas so they can continue farming.

Displaced families may obtain farms through Relocation Corporations established in a number of States, which have borrowed money from the Farm Security Administration for the purchase and improvement of new family-

type farms. As soon as possible, relocated farm families are keyed into the campaign for Food for Freedom and maintenance of their own nutrition at a high level.

DEFENSE activities are absorbing much of the farm labor surplus and, because it is essential that crops be harvested on schedule, migratory agricultural workers are cooperating with the Department of Agriculture in efforts to make labor readily available where it is needed. At the end of the fiscal year the FSA had accommodations for 15,000 families of migratory farm workers in stationary and mobile camps in California, Oregon, Washington, Idaho, Texas, Arizona, and Florida. An expanded camp program in 1942 is under way to provide a base for free movement and distribution of migratory workers to offset labor shortages.

Farmers in areas having too small farm units, worn-out land and poor housing will be able, in 1942, to obtain FSA special real-estate loans. These will help round out farm units; purchase tools, equipment, and materials for house and farm building improvements; renew soil, and refinance mortgages. Many farmers have been unable to get adequate assistance of this type previously because of the lack of loan funds. Increased farm income should lighten the demand for supplemental loans to many families already on the rehabilitation program, and in some sections will reduce the requirement for new loans. Thus Farm Security will have an opportunity to help more people in areas where extraordinary rehabilitation measures are needed.

FSA supervisors are renewing their emphasis on development of local leadership and establishment of cooperative services and enterprises which borrower families may use to help solve their problems. In 1942 many more families will be able to take part in the cooperative loan program.

At the end of the fiscal year, 21,100 groups of small farmers were buying and using all kinds of farm equipment together, and were jointly operating essential farm services as a result of the community and cooperative services program. Sires, tractors, wagons, threshers, combines, and other equipment had been purchased. In addition, small farmers had acquired a variety of off-the-farm community facilities, such as potato storage houses and cotton gins. County-wide purchasing and marketing associations are being organized where there are no adequate existing cooperatives through which FSA borrower families can buy and sell.

THE medical care program, through which 100,000 borrower families are getting medical attention through group plans worked out cooperatively by Farm Security Administration borrowers and State and County medical organizations, will be extended in 1942 to all counties where it is feasible. Through this plan families receive medical care for annual fees ranging from \$15 to \$45, depending on the type of service rendered. Farmstead sanitary improvement will be possible through expansion of the sanitation program as far as available funds will permit.

Because of past experience in low-cost rural housing, the Farm Security Administration has been designated by the Federal Works Agency to furnish permanent housing for 1,422 families of defense workers. In addition, on the recommendation of the Office of Defense Housing Coordination, the President has designated Farm Security as an agency to build temporary defense housing. By November 1 funds had been allocated to furnish 13,636 dwelling units, 6,004 for families and 7,632 for single people.

Farm Security is cooperating with the Department of Agriculture and with the National Resources Planning Board in preparing plans for useful public and private action when the

defense effort ends. County supervisors are working with land use planning committees in producing practical and socially useful plans for programs on rural housing, medical care, and

sanitation which can be used to help keep up full employment and cushion the shock of readjustment.

C. B. BALDWIN, *Administrator,
Farm Security Administration.*

Commodity Credit

RESERVES of feed, food, and fiber stored under Commodity Credit Corporation loan programs in years of abundance are now making effective contributions to the expanded requirements of the United States and to the urgent needs of the nations we are aiding.

Lend-Lease requirements for cotton, corn, tobacco, and naval stores are supplied from stocks accumulated through Commodity Credit loans and purchases. Corn reserves accumulated in the years of surplus harvest are providing additional feed supplies required for the planned expansion of our production of pork, dairy, and poultry products. Larger supplies of foods essential for the future also are being developed rapidly through current commodity loans and purchases. The Ever-Normal Granary has become an arsenal of defense.

AS a result of the increased demand for food and fiber occasioned by lend-lease activities and increased domestic requirements, the supplies of commodities owned by and under loan to Commodity Credit Corporation have been extensively reduced. During the 7 months April 1, 1941 (the date of the last official inventory) to October 31, 1941, sales of commodities owned, and repossession of commodities pledged by producers who repaid their loans, have reduced stocks of all major commodities accumulated in 1940 and earlier years.

Heaviest reductions have been in stocks of corn, where liquidations have amounted to nearly 172 million bushels from April 1, 1941 to October 31, 1941. Approximately 83 million bushels were

sold directly by Commodity Credit—including sales under Lend-Lease, and sales in line with the announced policy of disposing of supplies of corn on the market at reasonable prices to encourage the production of livestock and livestock products under the Food for Defense Program. In addition, producers have repossessed over 88 million bushels, leaving outstanding from the 1938, 1939, and 1940 crops about 216 million bushels that farmers may repossess by repaying loans. About 150 million bushels were owned by Commodity Credit Corporation as of October 31, after deducting quantities sold for future delivery.

COTTON stocks in the same 7-month period (exclusive of 1941 loan cotton) were reduced more than 4¼ million bales. To November 1, nearly 500 thousand bales had been transferred under Lend-Lease operations and sales of 150 thousand bales had been certified under the export program. Under this export program, the right to purchase 1937-crop cotton from Commodity Credit Corporation at a price slightly over its investment in the cotton at the time of sale is given persons who produce satisfactory evidence of having exported a similar quantity or bond to assure performance of contract to export cotton.

With the increase in domestic cotton prices during the spring months, occasioned by accelerated mill demand and legislation providing mandatory loans of 85 percent of parity, producers repaid outstanding loans on 4,218,437 bales pledged under the 1938, 1939, and 1940 loan programs. There remained in the 1938, 1939, and 1940 loans on November 1, to be placed in pool and sold for producers' account, only 45 thousand bales.

Cotton owned by Commodity Credit, after deducting commitments that had been made through November 1, amounted to approximately 5,500,000 bales. It is expected that transfers under Lend-Lease and sales under the export program may reduce this stock another half million bales by next summer. Loans had been made to November 1 on 425,510 bales of 1941 cotton.

DOMESTIC sales of wheat directly by Commodity Credit have been limited to interior mills having grain in storage which is needed for milling, of a type and class which is not otherwise obtainable and to sales of wheat that has deteriorated. Wheat sold by Commodity Credit and repossessed by producers totaled about 98 million bushels since the first of the year, reducing stocks of outstanding wheat in the producers' pool controlled by the Commodity Credit Corporation to approximately 170 million bushels. However, loans had been made through November 1 on 295 million bushels of 1941 crop wheat.

SINCE March 31, 1941, the Corporation has completely disposed of its stocks of gum turpentine after allowing for sales in process. During the same period, rosin stocks were reduced by approximately 521 thousand barrels or drums. Approximately 323 thousand barrels or drums were withdrawn under the Distribution Agreements through normal distribution channels, 115 thousand by sales of the American Turpentine Farmers Association with the approval of Commodity Credit Corporation, and 83 thousand by shipments under lease-lend procedure. The Corporation's rosin stocks on November 1 approximated 885,500 barrels and drums. These figures exclude approximately 55 thousand barrels of rosin which have been sold and are in the process of settlement, and are, therefore, still shown in Commodity Credit inventory reports. It is estimated that as of the

beginning of the new crop year, April 1, 1942, Commodity Credit Corporation rosin stocks should not exceed 500 thousand barrels or drums.

LEASE-LEND commitments now aggregate 118 million pounds of 1939 crop tobacco, of which 93 million pounds have actually been transferred. Commodity Credit loan and purchase holdings of tobacco on November 1, 1941 totaled 72,951,821 pounds of the 1939 crop and 218,154,793 pounds of the 1940 crop. Total purchases and loans from the 1941 crop will not greatly exceed 100 million pounds, dry weight basis. Thus, a net reduction in the Corporation's tobacco stocks is anticipated.

LOANS on 1941 crops of the cotton, corn, wheat, rice, and tobacco, are being made at 85 percent of the parity price as of the beginning of the marketing year, pursuant to the authority of the Agricultural Adjustment Act, as amended by Public Law 74 in the 77th Congress. In general, the programs are similar to those in effect during previous years. Innovations include the rice loan and purchase program offered for the first time this year, and location differentials in the corn loan program, adopted for the first time.

Programs on basic crops provide loans and purchases averaging approximately as follows:

Cotton.....	14.02 cents per pound.
Wheat.....	98 cents per bushel.
Corn.....	74.8 cents per bushel.
Rice.....	92 cents per bushel.
Flue-cured tobacco.	19.6 cents per pound.

In addition to these mandatory loans, programs have also been announced for rosin and turpentine, grain sorghum, barley, flaxseed, soybeans, legume and grass seed, butter, and dairy products.

AS a further effort in national defense, Commodity Credit during 1941 financed extensive purchases of

foodstuffs by Surplus Marketing Administration that are now available for purchase and export under the Lease-Lend Program, for sale in the domestic market, or for relief distribution. The principal commodities purchased and prepared for overseas shipment include cheese, dry edible beans, evaporated and dried milk, eggs, lard, pork and pork products,

Farm Credit

THE Farm Credit Administration in 1942 plans not only to provide on sound terms adequate credit to meet normal farm needs as well as the increased requirements of the Food for Freedom program, but also to act as a balance wheel in preventing undue inflation of farm real estate prices. Major wars inevitably bring about violent price fluctuations and in the past have actuated a speculative real estate boom. We are taking definite measures to prevent the headaches which followed World War I.

A permanent committee to study ways of checking speculation in farm lands and to exchange ideas concerning the farm mortgage business has been formed as a result of the conference of farm mortgage lenders and farm leaders held in Washington September 26. Lenders at the conference represented about 75 percent of the total farm mortgage debt of the country. They represented farm organizations, mortgage bankers, insurance companies, government agencies, American Bankers Association, and investment bankers.

Mortgage lenders were urged to adopt five major objectives:

1. *Make normal values the primary factor in making farm mortgage loans. The experience of the Farm Credit Administration shows this to be a sound basis of appraisal in a situation such as that which now confronts us.*

raisins, canned grapefruit and juice, canned tomatoes, cornstarch, and wheat flour. The purpose of the program has been to assure reasonable prices to encourage increased production, orderly marketing, and processing and storing.

J. B. HUTSON, *President,*
Commodity Credit Corporation.

2. *Impress upon present borrowers the wisdom of using higher incomes now available to pay their existing debts. This will be a factor in preventing inflation.*
3. *Urge farmers to build reserves out of today's higher incomes for possible "rainy" days in the future.*
4. *Avoid fostering speculative increases in production, yet at the same time carefully consider the needs for extending sufficient short-term credit so that farmers may make necessary shifts and increases in production to meet the needs of the food-for-freedom program.*
5. *Encourage the sound use of credit to build a better balanced agriculture yielding a higher, more secure standard of living on the family-type farm.*

THE aim of the Federal land banks and the Land Bank Commissioner always has been to lend upon normal values. That will continue to be true. The land banks are urging their borrowers to pay off as much of their mortgage obligations as they reasonably can, and to establish reserves against years in the future when farm income may be lower than it is now. The banks have provided for "future payment funds" to be deposited with them by borrowers. They pay the same rate of interest on these funds as farmers pay on their land bank loans. At the close of October farmer-borrowers had put nearly \$1,000,000 into their future payment funds.

The proportion of Federal land bank and Commissioner loans repaid has been increasing during the last several years. In the year ended September 30, 1941, approximately 6.1 percent of the outstanding principal on land bank loans was retired, and in the same period about 10.4 percent of the principal on outstanding Commissioner loans. Our figures show that from November 1, 1933, through September 30, 1941, farmers and ranchers repaid \$556,541,000 on their land bank loans. Nearly 93,000 loans were paid prior to maturity. Principal repayments on Commissioner loans since they first became available in 1933 aggregated \$320,530,000. Included in this are nearly 81,000 loans paid in full.

AT the end of September of the current year, there were outstanding nearly 1,100,000 Federal land bank and Commissioner loans for \$2,411,365,000. This represents approximately 34.7 percent of the estimated total farm mortgage debt in the United States on January 1, 1940.

The farm real estate market has improved considerably in the past year so that for the first time since 1934 the Federal land banks are holding less than \$100,000,000 worth of farms. The 18,799 farms held at mid-year were 19 percent fewer than a year earlier. Farm foreclosure sales likewise have been reduced. Foreclosures for the year ended June 30 were the lowest in 7 years, with forced sales by all types of lenders showing appreciable declines. In the case of the Farm Credit Administration, improvement in farm income and remedial measures adopted in 1940, when nearly 100,000 land bank and Commissioner loans were re-amortized, are considered largely responsible for the 38 percent decrease in 1941 foreclosures below 1940 figures.

THE 525 production credit associations are becoming an increasingly important factor in short-term farm credit. In July of this year they observed the lending of the 2-billionth dollar since their organization in 1933.

Loans in the first 9 months of 1941 totaled \$290,000,000, compared with \$240,000,000 in the same period of last year. This is the eighth successive year in which their volume of business has increased.

This expanded volume of business likewise is reflected in the business done by the Federal intermediate credit banks through which paper of the production credit associations is discounted. Many of these associations have built up considerable reserves and are now in a position to make a larger number of relatively small loans to farmers not hitherto reached by these associations. All loans will continue to be made only on what the associations and the Farm Credit Administration regard as a sound business basis, but it definitely is our intention to serve a larger proportion of farmers and stockmen. These associations are prepared to finance on a sound basis the changes necessary for farmers to meet the increased demand for food occasioned by the National Defense Program.

FARMERS' cooperative associations will be materially affected in 1942 by the defense program. There is an indication in the increased lending by the banks for cooperatives through 1941 that cooperatives are expanding their facilities and their business activities in keeping with the food program. In the first 9 months of 1941 farmers' marketing, purchasing, and business service cooperatives borrowed \$126,000,000 from the banks for cooperatives, compared with \$67,000,000 in the same period of last year. Outstanding credit of the 12 district banks and the Central Bank reached a new month-end peak of \$105,000,000 at the end of September of the current year. Recognizing the need of some of the banks for increased capital to meet the larger demand for credit, we recently subscribed from the Revolving Fund authorized by the Agricultural Marketing Act an additional \$59,000,000.

A. G. BLACK, *Governor,
Farm Credit Administration.*

Crop Insurance

A new responsibility—that of making Federal crop insurance available to cotton growers of the United States—has been delegated to the Federal Crop Insurance Corporation for 1942. More than three years' experience in insuring wheat crops preceded extension of this insurance protection program to cotton producers. Wheat insurance work has proved invaluable in organizing the cotton program, and, it is hoped, will enable the Corporation to equal or better the record it has made in wheat.

Increased participation for four consecutive years has been the record for the wheat insurance program. The high point of participation was reached this year when the 1942 wheat crop was insured on 437,633 farms. Most of this insurance covered winter wheat. This number exceeded the 416,954 contracts written on both winter and spring wheat for the 1941 crop year. With completion of spring wheat insurance February 28, 1942, it is expected the total number of farms insured will approximate 500,000.

The Corporation has set its cotton goal for 1942 at 500,000 contracts. There are several reasons for this: First, cotton farmers as a group have been intensely interested in the wheat insurance program since its inception and have repeatedly urged this same form of all-risk protection be made available to them. Second, there is a definite need for cotton crop insurance. Huge cotton surpluses in past years have obscured the fact that every year thousands of acres of cotton are lost through no fault of the growers. Every acre destroyed means lost income, less purchasing power, more insecurity, and increased migration of tenants and sharecroppers.

THE 1941 cotton crop year is a good example of what unavoidable hazards mean to the cotton grower and the extent to which cotton crop insur-

ance can assist the individual farmer to be self-sustaining. The boll weevil in the 1941 crop year destroyed millions of dollars worth of cotton. Had insurance been available in 1941 and all cotton growers been insured, much of this loss could have been indemnified, since growers would have been guaranteed 75 percent or 50 percent of their average annual yield. Weevils were the major cause of cotton crop destruction, but the total was increased by floods and drought. These unavoidable hazards, including frost, hail, plant disease, and others, are included in the all-risk protection contract which cotton growers will be offered for 1942.

The program is being taken to the field this month when the first contracts will be written. Indications are that the bulk of the applications will be made during the first two months of 1942. Regulations and procedures applicable to cotton have been patterned after the wheat insurance program.

Farmers will be required to contract for their cotton insurance before they plant and before the expiration of the final date for acceptance of contracts by the Corporation. Varying closing dates have been determined for different states because of the variation in farm practices.

THE commodity note plan of paying premiums will be in force under the cotton program. This note plan was put into effect for the first time on the 1942 wheat insurance signup. It can be, if the farmer chooses, a deferred payment plan. Both wheat and cotton insurance contracts contain the commodity note as part of the application. Under it, the grower obligates himself to pay his premium in either the actual commodity or the cash equivalent on or before the date of maturity. He has the option of selecting the time and method of payment. Maturity dates for the note vary from state to state, although, generally, all notes will

mature on or about the time of picking or the time indemnities usually are paid in a given locality.

If the note is not paid on or before maturity, the farmer allows the Corporation to deduct the amount of his premium from any indemnity he might receive. If no indemnity is payable, or if the indemnity is insufficient to satisfy the premium, it is deducted for the benefit of the Corporation from the unpaid amount of the first government payment due the farmer for participating in the national farm program or from his Commodity Credit Corporation loan. Where the notes are paid after maturity, payment must be made in cash. No interest is charged on these notes.

The note plan has two distinct advantages: On the basis of past experience, it is safe to assume that only a small percentage of growers will pay their premiums in the actual commodity. Thus, instead of purchasing the actual commodity with cash equivalent premium payments, the Corporation will carry its reserves in notes and save an estimated \$1,000,000 annually in storage and handling costs of wheat alone. The desirability of this plan for cotton where storage and handling also would have been involved can readily be recognized.

The second advantage is to the farmer himself. He does not have to put out any immediate cash outlay for his insurance protection. In the cases of tenants and sharecroppers this should be an important inducement for them to avail themselves of insurance. For cotton insurance, contracts will be written only when the applicant has an interest in a cotton crop and that interest can be determined at the time application is made. This requirement does not apply to the wheat program where past experience has shown many tenants had not completed leasing arrangements by the time the final day for accepting contracts expired.

This caused many growers to lose the opportunity to obtain all-risk protection. The note plan enables such farmers to contract for insurance even though they have not arranged for wheat land since the combined application-note applies to all farms in the county in which they have an interest in the crop.

PARTICIPATION by farmers is one gauge by which the success of the crop insurance program may be measured, but there is another: The relationship of indemnities paid farmers and premiums collected. In 1941 the Corporation paid out more than it collected—14,095,181 bushels in premiums compared to 17,712,803 of indemnities as of October 15. (In this connection it must be remembered that the Corporation is charged with responsibility for making crop insurance available to all wheat growers and, in 1942, all cotton growers.)

This same situation—indemnities exceeding premiums—can occur in the cotton program during a bumper crop year. It is entirely possible for cotton areas to duplicate the 1940 wheat history when customarily poor producing areas harvested phenomenal yields and more than offset complete crop abandonment in the ordinarily high producing areas. In such cases insurance losses are almost inevitable.

The certificate of indemnity plan for paying indemnities will be continued for wheat in 1942 and also will be applied to cotton. Insured growers suffering crop losses receive a certificate of indemnity that can be converted into either the actual commodity, if it is available, the cash equivalent, or turned over to the Commodity Credit Corporation for a loan on the amount of the commodity represented by the certification.

Two cotton branch offices have been opened by the Corporation—Dallas, Texas, and Birmingham, Alabama.

LEROY K. SMITH, Manager,
Federal Crop Insurance Corporation.

Marketing Farm Products

NOW and for the months ahead the biggest job of the Surplus Marketing Administration in this war emergency is in purchasing foodstuffs for Lend-Lease shipment abroad and in supporting market prices so that farmers will continue to have the incentive to increase production of commodities needed to meet greatly expanded export and domestic requirements.

Geared in with this defense assignment are the basic, long-time programs for encouraging wider markets for farm products and improving the income of farmers on their full production. Through these programs of the Surplus Marketing Administration, low-income families with inadequate diets and undernourished school children are able to get more food, new uses for farm products are developed, domestic and export outlets for agricultural commodities are encouraged, and more orderly marketing conditions are established.

THE purchase activities of the Surplus Marketing Administration have been greatly expanded with the buying for lend-lease shipment which began last spring. Under this expanded purchase program, commodities bought can not only be used to meet Lend-Lease requirements, but also for domestic distribution to public aid families and for school lunches, to meet Red Cross needs for shipment to war refugee areas, or for release upon the market when this is desirable. These various outlets for moving foodstuffs give the purchase program a high degree of flexibility, necessary not only in protecting the interests of farmers and consumers, but also in safeguarding the national interest.

Since defense purchase operations began March 15, 1941, more than 100 different items have been bought, primarily for Lend-Lease shipment to

Great Britain. Purchases to December 1 included more than 440,000,000 pounds of canned, cured, and frozen pork meat products, 308,600,000 pounds of lard, 137,400,000 pounds of cheese, 32,400,000 pounds of dry skim milk, 13,500,000 cases of evaporated milk, over 35,300,000 pounds of dried eggs, 66,000,000 pounds of frozen eggs, nearly 1,500,000 cases of shell eggs, over 5,300,000 cases of canned tomatoes, nearly 200,000,000 pounds of dried beans, nearly 135,000 tons of dried prunes, 53,500 tons of raisins, and millions of pounds of other fruits, vegetables, meats, dairy products, grains, cereals, and other foods.

A billion and a half dollars of Lend-Lease money, from the first and second appropriations, is being concentrated in the purchase of agricultural commodities alone. Slightly more than one-third of this amount has already been committed or spent for farm products. Purchases recently have been running at a rate approximating \$100,000,000 a month.

DOMESTIC distribution programs of the Surplus Marketing Administration are designed to reach persons who are still in need of public aid, and to keep open for farmers a wider market than would otherwise exist. Despite the increase in industrial employment and the rise in consumer income that have accompanied the national defense effort, many millions of persons have not shared in this gain. For the most part, these are the people who must continue to be dependent on public aid. Their need for more food is as great as ever. The limited purchasing power which they have is not enough to supply them with the food necessary to maintain good health.

Programs for increasing the consumption of agricultural commodities among the needy include the Food Stamp Program, the direct distribution of commodities to State welfare agencies for use by needy families in

areas where the Food Stamp Program is not operating, the distribution of foodstuffs for use in school lunches, and the low-cost milk programs.

THE Food Stamp Program, started in May 1939, is now operating in areas containing more than half of the Nation's population. In these areas close to 4,000,000 persons eligible to receive public aid are using nearly \$10,000,000 worth of blue stamps a month for the purchase of designated foods. These blue stamps which are given free serve to increase by about 50 percent the food buying power of those taking part in the program.

The commodities available at local stores in exchange for the blue stamps are those designated by the Secretary of Agriculture. Blue stamp foods listed during December, for example, included shell eggs, butter, pork, fresh pears, apples, oranges, grapefruit, fresh vegetables including potatoes, raisins, dried prunes, dry edible beans, corn meal, hominy (corn) grits, and various forms of wheat flour.

The greatest expansion in the Food Stamp Program took place during the 1941 fiscal year. The number of persons participating increased from 1,500,000 in June 1940 to 3,900,000 in June 1941. Blue stamp food expenditures increased from \$3,162,000 a month to \$9,950,000 in that same period. For the fiscal year as a whole, blue stamp expenditures totaled slightly more than \$82,800,000, with 12 percent of the money going for butter, 14 percent for eggs, 16 percent for cereal products, 25 percent for fruits and vegetables, and 32 percent for lard and pork products.

WHERE the Food Stamp Program is not in operation, commodities bought by the Surplus Marketing Administration under programs designed to strengthen farm markets are distributed by welfare agencies to public-aid families. The supplies so distributed are in addition to what these

needy families are able to buy or otherwise obtain.

Through the direct distribution of foods to families, the diets of more than 5,000,000 persons in the United States, Puerto Rico, and other outlying territory are being supplemented. This total is lower than in previous years, due largely to expansion of the Food Stamp Program and the decrease in the number of public-aid families. During the 1941 fiscal year, an average of 8,800,000 needy persons received under the direct distribution program about 2,100,000,000 pounds of foodstuffs.

Increasing quantities of food are being distributed for use in the school-lunch program which during the 1941-42 school year will probably be reaching 6,000,000 or more children. This program also makes use of foodstuffs bought by the Surplus Marketing Administration and distributed by State welfare agencies. During the 1940-41 year a total of 341,000,000 pounds of foodstuffs was made available for the school lunches. The peak number reached was in March 1941, when more than 4,700,000 children were served in nearly 66,800 schools. The peak number served in the year before approximated 2,500,000 children.

The lunches served to the children are made in whole or in part from the commodities supplied by the Surplus Marketing Administration. Foodstuffs needed to round out the meals are supplied by the local community groups sponsoring the program in the schools.

GREATER consumption of fluid milk is being encouraged through the low-cost milk programs. These are of two types—one supplies milk to public-aid families at a low price, and the other makes milk available for use by school children at a penny a half pint. The low price at which the milk is supplied to eligible persons is made possible through provision for a

special price to be paid producers, and through a Federal indemnity payment to handlers whose bids for furnishing the milk are accepted. The indemnity payment, plus the price received from sales, reimburses each handler for the milk and the handling and distributing services.

The special producer price paid for milk used in the programs is lower than that for regularly sold fluid milk, but higher than the price producers receive for so-called "surplus" milk used for manufacturing purposes. Through this arrangement it has been possible to increase the consumption of fluid milk among needy persons at the same time that returns to producers were improved for the additional quantities of milk used.

Programs making fluid milk available at a low price to public-aid families are operating in a half dozen areas including Boston, New York, Chicago, Washington, D. C., New Orleans, and St. Louis. In these areas more than 450,000 persons in public-aid families have been receiving their daily milk supplies at a price ranging from 4 to 6 cents per quart.

Other programs which make milk available to children in schools at a penny a half-pint bottle reached more than 800,000 at the close of the last school year. The school milk program is to be continued on a somewhat expanded basis this year.

FURTHER direct assistance to farmers in improving conditions under which they sell their products is being extended through marketing-agreement programs. These programs apply to a number of commodities including fluid milk, and a wide range of fruits, vegetables, and other specialty crops such as walnuts and hops.

There are two general types of marketing-agreement programs. The programs for fluid milk provide for the establishment of minimum prices to be paid producers by handlers in a marketing area, and prescribe the method through which producers are to be paid. The programs for such commodities as fruits and vegetables

provide for the regulation of shipments out of the producing areas on the basis of the volume shipped during any specified period of time, or by limiting the grades or sizes of the commodity shipped.

For the most part, marketing agreement programs continue to operate from year to year. While occasionally a program may be terminated for one reason or another, new programs developed from time to time have added to the total number. Of the 49 marketing agreement programs in effect during the last fiscal year, 30 regulated the handling of fluid milk and other dairy products and 19 regulated the handling of various specialty crops, mostly in the fruit and vegetable field. The commodities covered by these programs had a farm value approaching \$500,000,000.

OTHER programs of the Surplus Marketing Administration being continued on a basis adjusted to conditions arising out of the present emergency are those dealing with the diversion of agricultural commodities to develop new uses and wider outlets, and programs for encouraging exports. The use of cotton as an insulating material is being developed further. The manufacture of starch from surplus potatoes and oil from peanuts is still being encouraged. Export programs continue to be operated on a conservative basis because of unsettled world conditions. Through the use of subsidies export sales of cotton and of some wheat and wheat flour are being assisted.

All of the various programs that have been developed for dealing with agricultural marketing and distribution problems are meeting real needs of farmers and consumers. They are maintaining and building broader farm markets, adding to the economic security of farmers and providing low-income families more food for better nutrition and better health.

E. W. GAUMNITZ,
Associate Administrator
Surplus Marketing Administration.

Rural Electrification

THE pressure of international events is causing the Rural Electrification Administration to give electrification of rural defense areas increasing attention. Construction of normal distribution lines has been slowed down, almost to a stop, because of materials shortages. REA is, however, actively pursuing a program for establishing transmission and generating power cooperatives in vital defense areas and for securing widespread use of farm electricity to aid in implementing the Food for Freedom program.

Developments are already completed in several power-deficient States and others are planned or under way. In Texas the Brazos River Transmission Electric Cooperative, Inc., transmits power from the Morris Sheppard Dam to rural areas of North and North Central Texas. The Jones-Onslow Electric Membership Corporation is already providing emergency power for activities in connection with the new Marine Base in North Carolina and is being expanded to afford complete generating facilities. The Ark-La Electric Cooperative will soon have generation and transmission facilities to serve parts of Arkansas and Louisiana, and the KAMO Electric Cooperative will transmit power from Grand River Dam to rural areas in Missouri, Kansas, and Oklahoma. Other developments are under way in Kentucky, Alabama, and Minnesota, and all of these projects will serve defense areas.

AS early as June 1940 a defense committee was created to direct REA's defense activities and hundred percent cooperation is being given to all defense agencies. REA has the only public pool of engineers qualified to design and supervise construction of rural power facilities anywhere in the country and REA cooperation has already saved the Army and Navy substantial sums on power cost.

REA field representatives are now serving on 47 of the State USDA Defense Boards, and more than 2,000 directors of local REA cooperatives are members of county boards. In a statement issued September 25, Mayor LaGuardia pointed out that these cooperatives could make a valuable contribution to Civilian Defense work through plans for emergency housing and shelter, preparations for black-outs, and promotion of first aid classes and home-care instruction. The REA safety program is being organized on a State-wide basis, and it is expected that one of the byproducts of the program will be establishment of a useful reserve of local people trained in use of first-aid methods. In certain areas the program has already outgrown its primary objectives and become a widespread community activity.

Under the sponsorship of the Department, REA is making surveys of power, fuel, water, housing, skilled labor, and agricultural products in relation to National Defense and rural electrification. Such a survey conducted in the Shenandoah Valley of Virginia has already resulted in establishment there of a cooperative of small machine shop owners for handling Defense contracts. Surveys have also been completed in Louisiana and the Winooski Valley of Vermont; others are contemplated in New Mexico, Mississippi, Arkansas, and South Carolina.

THE REA is cooperating in the General Nutrition for Defense program by sponsoring establishment of rural Food Processing Centers in some 20,000 rural schools and community centers along the lines of its borrowers. A series of ten regional conferences was completed in October, explaining how funds would be made available to REA borrowers for financing purchase of electrical appliances for equipping these centers. Reports from several States indicate that centers are now being installed in increasingly large numbers. Establishment of such cen-

ters will make possible demonstration of better diets and will make possible or improve hot school lunches.

REA's most important single contribution to the National Defense is the same as its major peace-time contribution—its vast network of rural electric lines throughout the United States. On August 31, 1941, REA had allotted \$388,827,121 to 840 borrowers for constructing 372,551 miles of rural distribution line reaching an estimated 1,215,447 consumers. During the coming year, and the entire duration of the defense emergency, these lines will provide low-cost power for production, processing, and preservation of high quality defense foods with less manpower and for vital defense projects, defense industries, and emergencies. Other allotments have been made during September, October, and November, but materials shortages may preclude their translation into

power lines during the predictable future.

ACCORDING to REA's 1941 appliance saturation survey, twice as many electric power tools for farming are now in use for food production on REA-serviced farms as in 1939. Through increased use of electrical devices, more milk is being marketed from the same number of cows where cooling devices, stanchion cups, and electric milking machines are in use. Electrically lighted henhouses and electric brooders are getting more eating eggs and more eating chickens from the same number of hatching eggs. Rural power, which is now reaching 34.9 percent of the farms in the United States, will do its part in the Battle of Food next year.

HARRY SLATTERY, *Administrator,
Rural Electrification Administration.*

NEW WINES FOR OLD

United States production of wine increased more than 80 percent during the first two years of World War II—increasing from less than 66 million gallons in 1938-39 to more than 122 million gallons in 1940-41. Much of this increase is attributed to the increased purchasing power of the people in the United States and to the increased consumption of wine in this country.

* * * *

United States exports of wine also have increased greatly during the last two years, whereas imports have been sharply reduced. During the years prior to World War II the United States imported about 3 million gallons of wine annually, principally from France, Italy, Spain, and Portugal. Imports from France and Italy have now been practically cut off by the War. Were it not for the War, it is likely that United States total imports of wine would greatly exceed 3 million gallons in 1942.

* * * *

Many varieties of wine grapes are produced in the United States—in the vast arbors of California, New York, and other States. United States production of grapes for all purposes—for wines, for raisins, and for eating out of hand—is more than 2.5 million tons a year. Many of the vines have not yet come into full bearing; much larger tonnages of grapes will be produced during the next five or six years.

* * * *

Large quantities of United States wines are being carried in storage for ageing and for export to other countries which have been shut off from France and Italy by the War. On October 1 last, the stocks of wine in the United States totaled 118 million gallons. These stocks included many kinds of still wines, sparkling wines, Vermouth, and champagnes. United States consumption of wines of all kinds may total 100 million gallons during the coming year—a demand that will be supplied practically entirely by United States vintners and wineries.—F. G.

Exports During 2 Years of War

UNITED STATES exports of some farm products increased greatly—others declined—during the first 2 years of World War II. Notable was the increase in exports of dairy and poultry products under Lend-Lease authorization by Congress. Exports of fresh and cured pork declined during the first year of the war, but have been increasing recently, and for the second full year totaled approximately the same as in the first year. Exports of lard, also, have increased in recent months. Exports of dried beans were practically doubled during the second year of World War II.

United States exports of cotton were little more than 1 million bales during the second year of World War II, as contrasted with more than 6 million

bales during the first year. Wheat exports have continued to shrink, and were smaller in the second than in the first year of the war. Tobacco exports were down more than one-third during the second year of the war. Exports of fresh apples declined to less than 900 thousand bushels, and shipments of fresh pears were less than a third of the volume exported during the first year of World War II.

Of United States imports of farm products large increases are shown for wool, hides, and skins, and decreases for such commodities as canned beef and barley malt—during the second year of World War II. Other commodities such as sugar, flaxseed, and leaf tobacco showed little change.

United States: Exports and Imports of Specified Agricultural Commodities, 1939-40 and 1940-41 and September 1940 and 1941¹

Commodity	Unit	Year beginning Sept. 1		September	
		1939-40	1940-41	1940	1941
EXPORTS					
Pork:		Thousands	Thousands	Thousands	Thousands
Cured pork ¹	Lb.....	45, 673	47, 426	1, 162	12, 242
Other pork ¹	Lb.....	74, 827	63, 075	2, 736	18, 020
Total pork.....	Lb.....	120, 500	111, 101	3, 896	30, 262
Lard, including neutral.....	Lb.....	247, 037	247, 136	9, 956	46, 976
Dairy products and eggs:					
Cheese.....	Lb.....	1, 823	42, 678	191	13, 802
Milk, condensed (sweetened).....	Lb.....	11, 862	68, 744	2, 402	6, 300
Milk, evaporated (unsweetened).....	Lb.....	99, 309	222, 502	16, 017	45, 875
Milk, dried.....	Lb.....	9, 867	33, 695	796	4, 155
Eggs in the shell.....	Doz.....	4, 416	23, 035	227	1, 106
Egg products, dried, etc.....	Lb.....	113	16, 461	14	6, 903
Beans, dried.....	Lb.....	79, 338	154, 516	3, 282	41, 365
Wheat, including flour.....	Bu.....	44, 743	39, 439	3, 045	5, 787
Apples, fresh ²	Bu.....	2, 920	882	76	69
Pears, fresh.....	Lb.....	73, 311	22, 043	2, 618	2, 133
Tobacco, leaf.....	Lb.....	300, 309	184, 449	6, 394	23, 375
Cotton, excluding linters (500 pounds).....	Bale.....	6, 343	1, 186	97	198
IMPORTS					
Cattle.....	No.....	623	720	30	35
Beef, canned, including corned.....	Lb.....	76, 055	66, 759	4, 016	15, 978
Hides and skins ³	Lb.....	331, 565	524, 657	28, 012	48, 468
Barley malt.....	Lb.....	61, 279	38, 972	2, 497	3, 402
Sugar, cane (2,000 pounds).....	Ton.....	3, 238	3, 474	200	202
Flaxseed.....	Bu.....	11, 866	12, 090	24	1, 853
Tobacco, leaf.....	Lb.....	64, 530	65, 509	5, 500	5, 795
Wool, excl. free in bond for use in carpets, etc.....	Lb.....	171, 427	548, 861	15, 357	45, 138

¹ Corrected to November 10, 1941.

² Includes bacon, hams, shoulders, and sides.

³ Includes fresh, pickled or salted, and canned pork.

⁴ January-August. Not separately classified prior to January 1, 1940.

⁵ Includes baskets, boxes, and barrels in terms of bushels.

⁶ Excludes the weight of "other hides and skins" which are reported in pieces only.

Office of Foreign Agricultural Relations. Compiled from official records, Bureau of Foreign and Domestic Commerce and of the Bureau of the Census.

Farm Products: Producer to Consumer

VI. Government Policies in Marketing

THE preceding five papers in this series have presented a good deal of factual and descriptive material on marketing, have analyzed trends and developments in the marketing system, and have presented a brief survey of some of the principal marketing problems in this country. This final paper in the series will concern itself with the question, "What is being done and what should be done to solve these marketing problems?"

First, it must be obvious that some of the big marketing problems cannot be solved by the individual farmer. The individual farmer can decide within fairly wide limits what he is going to do on his own farm; he has important decisions to make about farm management, the use of land, and similar production problems; he can decide for himself certain kinds of marketing problems on or near the farm, for example, whether to grade his potatoes, whether to pack his apples in baskets or boxes, whether to sell on commission or for cash at the farm, and whether to ship by rail or by truck. Together with his neighbors in a cooperative association or as a member of a county planning committee he may be able to work out a program for supplying eggs or vegetables to local stores, or he may be able to help plan a new creamery for the locality.

Important as these decisions are, however, it is clear that neither the individual farmer nor any small group of local farmers can do very much to improve the transportation system or to bring about better methods of processing and manufacturing foods and clothing, or to reorganize the system of wholesale and retail distribution. Yet these basic problems are of great concern to the farmer and to the nation.

THE first article of this series stated: "In 1940 consumers spent about 14.8 billion dollars for food products produced by American farmers. Total payments to farmers for producing these foods amounted to 6.2 billion dollars. The national marketing bill was 8.6 billion dollars." These few figures are enough to indicate the magnitude of the job. We cannot possibly expect to eliminate the marketing bill, but the farmer and the consuming public have a right to insist that the necessary services of marketing, processing, transportation and distribution be performed as efficiently as possible, taking advantage of all modern improvements in technique.

Some of these improvements have come naturally as a result of competition. Further improvements doubtless will be made in the future by the same process. But farmers have felt for at least a generation that these improvements through the ordinary competitive processes are too slow, incomplete, and fail in many instances to accomplish the changes which were needed. In recent years the consuming public—and to a considerable extent the middlemen also—have become more and more convinced that the farmer has been right as to this and that we need a definite Government program to clear up bad marketing situations and to promote sound marketing policies. As a result, both the State legislatures and the National Congress have passed in recent years legislation which is having a far-reaching effect upon our marketing system.

THE marketing of farm products is a relatively new field for education and research. Before World War I only two or three college courses were being offered in this field, only a handful of pioneering studies had been

made, and there were no textbooks on marketing. Since 1920 there has been a fairly rapid development of college courses in marketing, extension work in marketing, and research by the agricultural colleges, the United States Department of Agriculture, and other organizations. This program of education and research has been distinctly helpful in providing a large body of factual material about marketing and in promoting an interest in marketing problems. But the program has been primarily one of fact finding; it has not gone as far as it may toward the discovery of practical ways of bringing about fundamental improvements in marketing.

Along with the development of an educational and research program in marketing the State and Federal Governments have provided a number of services to enable the marketing system to operate more effectively. These include market news, crop and livestock statistics, official grades, and inspection. Before World War I practically no services of this kind were provided either by the State or Federal Governments. It would be difficult to get along without such services today. We take them for granted because their value has been demonstrated, and are likely to forget that they need to be constantly adjusted and in many cases expanded to meet the rapidly changing needs of our agricultural marketing system. Agricultural economists should be giving more attention to such problems as grade definitions and inspection services which are needed to give proper rewards to farmers and to encourage those adjustments in production and marketing that are mutually advantageous to producer and consumer.

PROBABLY the most controversial subject in marketing is Government regulation. Without question the trend during the past twenty years has been toward more Government regulation. Some types of marketing regulation have had, and still have, the

overwhelming support of farmers, dealers, and consumers. This is especially true of laws and regulations which are aimed at the suppression of unfair and dishonest trade practices such as the Perishable Agricultural Commodities Act which is administered by the Agricultural Marketing Service. Here the Department of Agriculture is simply trying to enforce standards of honest dealing which are commonly accepted as desirable by practically all groups of citizens. In a similar way, practically all groups have supported programs by the Federal Trade Commission, the Department of Justice, and others for suppressing practices which were monopolistic or which were evidently injurious to the whole population.

But there are other types of regulations which hinder trade and add to the costs of marketing. The public has recently been shocked for instance, to learn of the extent of so-called interstate trade barriers. These barriers can be defined roughly as laws and regulations which unnecessarily hinder or prevent free trade within the country. There is now substantial agreement between the United States Department of Agriculture, the Departments of Agriculture in the States, and the Council of State Governments that many existing laws and regulations of this kind are harmful, that they are limiting the market for the farmers' product, that they are resulting in great inefficiencies both in marketing and in production, and that they are harming the consumer by raising retail prices and by making it impossible for many consumers to obtain desired kinds and qualities of foods. This evidently calls for a broad reconsideration of Government regulatory policies. It does not imply that we can or should abandon regulations in marketing. Marketing emphasizes the need for regulations which will preserve free and open markets throughout the country.

THERE is a noticeable tendency for the various trade groups to

promote legislation designed to freeze the marketing system in its present pattern, to hinder the development of new forms of marketing, or to prescribe the methods to be used and the charges to be made. Many bills have been introduced in State legislatures and in the Federal Congress to hinder the further development of some forms of direct marketing, to penalize certain methods of retailing, and to enforce standard charges for various marketing services. These can hardly be classed as trade barriers in the usual sense. However, it seems doubtful whether either the farmer or the consuming public can, in the long run, get any benefit from legislation which has as its sole purpose to prevent innovations in marketing or to prevent the lowering of marketing charges through competition.

It may well be that some new forms of marketing carry with them grave evils. Possibly in some cases these evils are so important and so inherent in the new methods that the whole public may be willing to sacrifice efficiency for the sake of accomplishing other important objectives. But in general we should be able to suppress the evils without giving up whatever advantages there may be in new methods. We should hesitate a long time before we set uniform charges in such a way as to prevent economies from being passed on to the public. Some of our recent regulations in transportation and in price maintenance should be carefully scrutinized from this point of view.

IN RECENT years the Government has taken an active part in developing and carrying out marketing pro-

grams. Examples are the ever-normal granary program for storing agricultural surpluses, the Food Stamp Plan, the School Lunch Program, export subsidy programs, the purchase of food for Britain and other nations resisting aggression, and the marketing agreements for fruits and vegetables and for milk. In most cases these programs are carried out in active cooperation with the trade, but they represent a long step from former Government policies which were limited largely to education, research, service, and regulation. The Government has taken on new responsibilities in marketing. The various programs have several objectives, but the major objectives are to widen and strengthen the market for farm products and to get a better distribution of these products in such a way as to contribute effectively to the standards of living of the consuming public.

We still have far to go to reach these objectives, but we have gone far enough to demonstrate that some kinds of Government programs can be of great benefit to farmers, to consumers, and to trade groups. Not only can these programs give temporary benefits to all these groups, but in the long run it seems likely that they may become a vital part of a comprehensive agricultural program of the future. An effective marketing program which would make it possible for the entire American public to maintain a satisfactory diet and to buy adequate clothing may do more than any other one thing to accomplish adjustments which are needed in agricultural production.

FREDERICK V. WAUGH.

An index of articles which have appeared in **THE AGRICULTURAL SITUATION** during 1941 is obtainable from the Bureau of Agricultural Economics, Washington, D. C.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1924-29=100) ²	Cost of living (1924-29=100) ³	Wholesale prices of all commodities ⁴	1910-14=100			Farm wages	Taxes
					Prices paid by farmers for commodities used in ⁵ —				
					Living	Production	Living and production		
1925	90	98	101	151	164	147	157	176	270
1926	96	102	102	146	162	146	155	179	271
1927	95	100	100	139	159	145	153	179	277
1928	99	100	99	141	160	148	155	179	279
1929	110	107	99	139	158	147	153	180	281
1930	91	88	96	126	149	140	145	167	277
1931	75	67	88	107	126	122	124	130	253
1932	58	46	79	95	108	107	107	96	219
1933	69	48	75	96	109	108	109	85	187
1934	75	61	77	106	122	125	123	95	178
1935	87	69	79	117	124	126	125	103	180
1936	103	80	80	118	122	126	124	111	182
1937	113	94	83	126	128	135	130	126	187
1938	89	73	81	115	122	124	122	125	186
1939	108	84	80	113	120	122	121	123	190
1940	123	95	81	115	121	124	123	126	-----
1940—November	134	104	81	116	-----	-----	122	-----	-----
December	139	108	81	117	122	125	123	-----	-----
1941—January	140	111	81	118	-----	-----	123	124	-----
February	144	111	81	118	-----	-----	123	-----	-----
March	147	113	82	119	124	125	124	-----	-----
April	144	113	82	121	-----	-----	124	138	-----
May	154	125	83	124	-----	-----	125	-----	-----
June	159	133	84	127	129	128	128	-----	-----
July	160	138	85	130	-----	-----	130	160	-----
August	160	139	86	132	-----	-----	133	-----	-----
September	161	142	87	134	136	135	136	-----	-----
October ⁷	164	142	88	135	-----	-----	139	165	-----
November ⁸	-----	-----	-----	136	-----	-----	141	-----	-----

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio of prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Poultry and eggs	All groups	
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	159	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	159	151	158	153	149	96
1929	120	144	141	149	156	157	162	146	95
1930	100	102	162	140	133	137	129	126	87
1931	63	63	98	117	92	108	100	87	70
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	99	100	103	68	95	89	90	73
1935	103	101	91	125	118	108	117	108	86
1936	108	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1940	85	81	79	114	108	113	96	98	80
1940—November	83	79	71	99	112	121	120	99	81
December	81	79	75	93	111	128	122	101	82
1941—January	84	80	78	117	130	121	100	104	85
February	81	80	80	156	130	118	90	103	84
March	84	82	83	134	129	118	90	103	83
April	90	88	89	161	137	121	104	110	89
May	93	98	89	146	138	124	107	112	90
June	96	107	97	148	144	126	118	118	92
July	98	121	93	130	154	132	127	125	97
August	99	128	100	133	158	135	130	131	98
September	106	150	89	145	166	140	141	139	102
October	101	144	107	164	157	145	146	139	100
November	103	136	98	147	151	148	157	135	96

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Adjusted for seasonal variation. Revised April 1941.

³ Monthly indexes for months not reported by the Bureau of Labor Statistics are interpolated by use of the National Industrial Conference Board cost-of-living reports.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The base periods are different. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

PRODUCTION FOR VICTORY THE AGRICULTURAL • SITUATION •

JANUARY 1942

A Brief Summary of Economic Conditions

Issued Monthly by the Bureau of Agricultural Economics, United States Department of Agriculture

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ENTRY OF THE UNITED STATES into World War II puts new responsibilities on American agriculture. Food becomes a major need for victory . . . food in abundance for us and our Allies . . . food in increasing volume of shipments over-seas. * * * Assurance is, in Food-for-Victory campaigns, that 6 million farm families . . . more than 30 million farm people in the United States . . . are all-out to supply food in plenty to win this War. Some foods—wheat and feed grains for cereals and the production of livestock products—already are in national abundance. Other foods—milk and manufactured dairy products, poultry and eggs, meats, and vegetables—are in continuously increasing production. Much more of these foods is needed in 1942. * * * Farm lands are in unusually good condition as result of conservation programs in recent years. Granted good weather in 1942 the volume of crop and livestock products will surpass all previous records. Food production goals are to this end.

Commodity Reviews

PRODUCTION: Goals

FARM production goals for 1942 are being reexamined by Department of Agriculture officials to determine the additional adjustments needed in view of the entry of the United States into World War II. Farmers' reports of production plans for 1942 are being analyzed in relation to domestic consumer requirements, Lend-Lease exports, and the accumulation of food reserves.

Early returns in the Food-for-Freedom campaign indicate that total food production in 1942 will be the largest in our Nation's history. It is not yet clear whether the cattle slaughter goal of 28 million head of cattle and calves will be reached, but in the case of some other commodities—notably the production of eggs—returns from some areas show increases beyond the goals set last Autumn. Hog slaughter may exceed the goals by about 5 percent.

Supplies of feed grains are the largest in 20 years, but the number of feed-consuming animals is also of near-record proportions. To produce the increased quantities of meats, milk, eggs, and other livestock products sought in 1942 will require the consumption not only of all feed grains produced in 1941, but of some stocks from the Ever-Normal Granary as well. Stocks in the Ever-Normal Granary constitute a strong bulwark of defense—and victory.

CONSUMPTION: Up

Food consumption—total and per capita of the population—in the United States is the largest on record. The total includes cereals, meats, fish, poultry and eggs, dairy products, fats and oils, vegetables, sugar, and fruits. Production is increasing; buying power of consumers is the best on record. Consumption has been stimulated also by Government aids to low-income

groups and to school children—by means of Food Stamp, School Lunch, and Low-Cost Milk Programs.

Secretary Wickard announced at year's end that since we have on hand the largest total supplies of food in the history of the United States, "there is little excuse for any substantial increase in the price of agricultural commodities at this time." The Secretary added: "We have large supplies of feeds in our Ever-Normal Granary and the productive capacity on our farms to add to our food supply on an unprecedented scale."

PRICES: Up

Prices of farm products begin the new year at the best general levels in a decade or more. Costs of production also are the highest for this period. Both prices received and prices paid by farmers are expected to rise in 1942. The increase in prices received may not be as much as it was in 1941 (ceilings are being established on a number of commodities), but the average of prices received times increased production is expected to yield farmers a considerably larger cash income than in 1941. The rise in costs of production may be larger than it was in 1941, but not in total sufficient to offset the gain in cash income from marketings of farm products.

Average of prices received by farmers in 1941 was 122 percent of the 1909-14 base period; average of prices paid was 132 percent of the base period. Purchasing power of farm products was 92 percent of the base period, as compared with 80 in 1940, 77 in 1939, 93 in 1937, and 95 in 1929.

INCOME TAX: Returns

More than 2,000,000 farmers will be required to file Federal tax returns this year on 1941 income. Requirement is that all single persons having

gross income of \$750 or more, and married persons having gross income of \$1,500 or more, must file an income tax return. Gross income includes all the receipts of the farmer from both farm and nonfarm sources; it includes, also, the value of merchandise re-

ceived in exchange for farm products. It does not include the value of food produced and consumed on the home farm. Returns for the 1941 calendar year must be filed with the collector of internal revenue not later than March 15, 1942.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
December.....	101	123	82
1941			
January.....	104	123	85
February.....	103	123	84
March.....	103	124	83
April.....	110	124	89
May.....	112	125	90
June.....	118	128	92
July.....	125	² 139	² 97
August.....	131	² 133	² 98
September.....	130	² 136	² 102
October.....	139	139	100
November.....	135	141	96
December.....	143	143	100

¹ Ratio of prices received to prices paid.

² Revised.

LABOR: Winter's Needs

A farm labor force of about 9 million will be busy this winter producing the milk, the eggs, the truck crops, and other foods needed for us and for Britain. About a fourth of this number will be hired workers, the remainder farm family workers. Wages to farmhands are the highest in years; these wages plus food and housing compare favorably with the net returns from industrial employment.

The farm pay roll in 1941 was close to 1 billion dollars, since farm wage rates increased about 30 percent during the year, and about the same number of wage hands were employed as in 1940. The farm pay roll will be bigger this year, as the demand for workers increases to produce the high record

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States]

Product	5-year average, August 1909-July 1914	December average 1909-13	December 1940	November 1941	December 1941	Parity price December 1941
Cotton, lb.....	cents 12.4	12.2	9.33	15.78	16.23	17.86
Corn, bu.....	do. 64.2	57.7	54.5	63.7	66.9	92.4
Wheat, bu.....	do. 88.4	86.7	71.5	93.4	102.2	127.3
Hay, ton.....	dollars 11.87	11.99	7.53	8.71	9.43	17.09
Potatoes, bu. ¹	cents 69.7	62.3	² 54.7	77.4	82.7	101.3
Oats, bu.....	do. 39.9	38.3	² 32.3	41.1	45.2	57.5
Rice, bu.....	do. 81.3		79.2	120.4	143.9	117.1
Peanuts, lb.....	do. 4.8	4.6	3.22	4.61	4.79	6.91
Tobacco:						
Flue-cured, types 11-14, lb. ³ do.	22.9		12.1	24.2		26.1
Fire-cured, types 21-24, lb. ¹ do.	13.6		8.5		14.8	12.1
Burley, type 31, lb. ³ do.	22.2		17.3		20.1	25.3
Maryland, type 32, lb. ¹ do.	22.9		² 9.6	25.0	25.0	20.4
Air-cured, types 35-37, lb. ¹ do.	11.2		7.6		11.4	10.0
Cigar binder, types 41-55, lb. ¹ do.	21.0					
Apples, bu.....	dollars .96	.91	10.0	23.4	27.1	18.7
Beef cattle, cwt.....	do. 5.21	5.03	² 7.84	8.85	1.09	1.38
Hogs, cwt.....	do. 7.22	6.73	5.50	9.66	9.38	7.50
Chickens, lb.....	cents 11.4	10.6	13.0	15.5	15.8	16.4
Eggs, doz.....	do. 21.5	29.9	26.8	33.5	34.1	38.4
Butterfat, lb.....	do. 26.3	29.9	34.8	36.7	36.0	41.4
Wool, lb.....	do. 18.3	18.6	31.2	36.7	37.1	26.4
Veal calves, cwt.....	dollars 6.75	6.74	9.01	10.79	11.22	9.72
Lambs, cwt.....	do. 5.87	5.52	7.88	9.48	9.86	8.42

¹ Post-war base.

² Revised.

³ Base price, crop years 1934-38.

⁴ Adjusted for seasonality.

volume of commodities needed for us and for Britain.

The largest farm pay roll on record was 1.8 billion dollars in 1920, or more than double the outlay in the years immediately preceding World War I. The outlay averaged about 1.3 billion dollars a year during the 1920's, but dropped sharply to little more than 500 million during the depression of the early 1930's. Wages increased with farm income in succeeding years; total in 1940 was 750 million dollars.

DAIRY OUTPUT: Up

Milk production in 1942 is expected to set a new high record. Increase over 1941 will result from an increase in number of cows on farms, and probably heavier feeding. A total milk flow of 125 billion pounds is desired, as compared with 117 billion produced in 1941. Despite increased production, prices of dairy products are expected to average higher than in 1941, as domestic consumer buying power and Lend-Lease exports increase.

Expectation is that the production of butter will be smaller during the first half of 1942 than in the like period last year, but that production of cheese, evaporated milk, and dry skim milk will be larger. The Department of Agriculture recently announced that a total of 200 million pounds of dry skim milk is required in present goals for shipment to Great Britain under the Lend-Lease Act. This would be the equivalent of a 40 to 50 percent increase in production of dry skim milk this year over last.

During the summer of 1941 butterfat-feed price ratios were more favorable than a year earlier, but in subsequent months became less favorable. The butterfat-feed grain price ratio usually increases during the fall months, but there was not much change in the ratio in 1941. The butterfat-byproducts feed price ratio declined fairly steadily from May through the end of the year. But the ratio of prices paid by condenseries to

feed-grain prices increased during this period, and at year's end was considerably higher than a year earlier.

FATS, OILS: Big Demand

Fats and oils are in greatest demand in our Nation's history. Production in 1941 was the largest on record; further increases are sought for 1942. Producers are being urged especially to increase the production of soybeans and peanuts for oil. Prices of fats and oils are at high levels, and are likely to continue so for the duration. The Federal Government has established ceilings for wholesale prices of all fats and oils, except butter, at the level of prices prevailing on October 1, or 111 percent of prices on November 26, whichever is higher, with three-fourths of a cent added to the October 1 prices for linseed oil and soybean oil.

Estimates are that supplies of fats and oils from production, stocks, and probable imports will be enough to maintain domestic consumption and exports in 1942 at the 1941 level, even though imports of oilseeds and oils from the Pacific area are completely cut off. Domestic consumption of primary fats and oils was about 11 billion pounds in 1941. Consumption in 1940 was less than 10 billion pounds.

EGGS: Increase

Production and marketing of eggs are increasing seasonally; total is larger than at this time last year. Laying flocks average about 10 percent larger than at the beginning of 1941—an increase almost sufficient to reach the 1942 egg production goal of about 4 billion dozens even though the average rate of lay should be no larger than it was in 1941. Estimate also is that the production of chicken meat will be about 12 percent larger this year than last.

It is expected that more than 3 billion eggs will be produced this month, more than 3½ billion in February, more than 4½ billion in March, and more than 5 billion in April—peak

month of annual egg production. All these figures are higher than in corresponding months last year. And then during the months of seasonal decline in production—May through November—it is expected that production will be larger than at the same time last year.

The Department of Agriculture says that in addition to having hens of higher egg-laying capacity than in former years, farmers are increasing the size of their flocks as much as possible, and are giving these flocks exceptional care so as to maintain a maximum rate of egg output. Feed costs recently have been the highest since 1937, but feed-egg price ratios are more favorable to poultrymen than at the beginning of 1941. Production of hatchery chicks was reported 66 percent larger in November 1941 than a year earlier.

HOG GOALS: Exceeded

The 1941 fall pig crop was the largest on record—more than 35 million head as compared with 30 million in 1940, and with 27 million average during the 10 years 1930-39. The 1941 crop was larger than a year earlier in all regions and in nearly all States: East North Central, up 11 percent; West North Central, 30 percent; North Atlantic, 2 percent; South Atlantic, 3 percent; South Central, 20 percent; Western, 14 percent. The number of pigs saved per litter—6.43—was the largest on record.

The number of sows to farrow in the spring of 1942 has been indicated at nearly 10 million, compared with 7.8 million a year earlier, and with 7.6 million average in 1930-39. Assuming litters equivalent in size to the average of the last 5 years, the spring pig crop of 1942 may total 62 million head. This would be the largest spring pig crop on record. It compares with 50 million head in each of the last 2 years.

Secretary Wickard announced in December that "American farmers will exceed the 1942 Food-for-Freedom

hog production goals, thereby virtually assuring ample pork and pork products next year for the United States, Great Britain, and other nations resisting aggression. The December report shows that the pig crop in 1942 may reach 97 million head—on the basis of a spring crop of 62 million and a fall crop of 35 million—larger by 10 million head than any other pig crop on record. After allowing for normal death losses, a pig crop of this size would permit farmers to exceed by 5 percent their 1942 marketing goals of a little over 79 million head."

LAMBS: Record

Total number of sheep and lambs fed this season is expected to set a new high record. Increases in feeding in Colorado, Montana, Utah, and several Western Corn Belt States are expected to more than offset decreases in other regions.

In Texas, the number of lambs on wheat pastures and to be grain fed is larger than a year ago; shipments during January and February may exceed those of a year earlier. Government livestock specialists point out, however, that because of the relative high price of wool, many lambs may be carried over and shorn this spring.

Forecast is that United States total slaughter supplies of sheep and lambs during late winter and early spring will be a little larger than in the same months of 1941.

CATTLE: On Feed

Government livestock specialists look for relatively large shipments of cattle to Corn Belt feed lots this winter, following reduced shipments last fall, but they estimate that the total for the 1941-42 feeding season will be smaller than in 1940-41. Offset in part will be the feeding of a larger number of cattle raised in the Corn Belt. Total numbers fed will be smaller than in 1940-41; the proportion of well-finished cattle in slaughter supplies this year is likely to be smaller than in 1941.

At year's end it was reported that cattle and calves in the Range States were going into the winter in the best condition in many years. Range feed conditions have been exceptionally good; the large calf crop of 1941 is reported as having developed well. Reports from the Range States indicated that the fall movement of cattle was smaller than during the fall of 1940, because of large supplies of range forage and other feeds.

A large movement of cattle to Kansas wheat pastures was reported at year's end. Movement of Texas cattle into the Plains section of Texas was much larger than in 1941; but the movement of cattle out of that section has been smaller than a year earlier.

FRUITS: Good Year

This should be a relatively good year for fruit growers. Producers of deciduous fruits have had to market larger crops this season than last, but prices have been better as result of a higher level of consumer demand and increased purchases of fruit by the Department of Agriculture. December forecast was for a smaller total of citrus production (more oranges, but fewer grapefruit and lemons) this season than last, and a higher level of prices. Probability is that a larger proportion of the citrus crops will be canned or otherwise processed this season.

Government fruit specialists look for about the same total of fruit production in 1942 as in 1941, with a generally smaller output of deciduous fruits probably offset by a larger production of citrus. They say that on the basis of the trend in bearing tree numbers, alternate bearing characteristics, and good care of orchards, normal growing conditions in 1942 would result in a smaller production of apples, peaches, pears, plums, and prunes, but a larger output of apricots, cherries, grapes, strawberries, oranges, grapefruit, and lemons than in 1941.

The long-time outlook, based on changes in the number of trees of bearing age, is for a moderate increase in the rate of fruit production during the next few years. Production of apples and of prunes for drying is expected to continue to decline, but a further slight expansion is indicated for citrus fruits, peaches, pears, cherries, plums and fresh prunes, and grapes.

VEGETABLES: Increase

Increased plantings of vegetables are reported in prospect for 1942, as result of generally higher prices in 1941. Outlook is for an increase in acreages of potatoes, sweetpotatoes, and truck crops (both for market and for processing). National goals call for an increase of nearly 5 percent in plantings of potatoes, of 1 percent in sweetpotatoes, about 5 percent in truck crops for market, and 25 percent (revised) in acreage of truck crops for processing. No change in acreage of dry edible beans is indicated.

Supplies of potatoes smaller than a year earlier, but larger supplies of sweetpotatoes and canned vegetables, are expected to be available for marketing during the first half of this year. Production of processing vegetables set a new high record in 1941, and the pack of canned vegetables and products is substantially larger this season than last. Production of 11 truck crops—*asparagus to tomatoes*—for processing totaled nearly 5 million tons in 1941, compared with 4 million in 1940.

Prices of truck crops generally are about 50 percent higher than at this time last year.

WHEAT: Seedings

A 14-percent reduction in acreage of winter wheat seeded last fall as compared with 1940 was reported at year's end by the United States Department of Agriculture: 39,318,000 acres seeded as compared with 45,663,000 acres in 1940. Reductions were distributed

fairly generally the country over except in a few minor wheat-producing States. The decrease in seeded acreage is in line with the reduced 1942 wheat acreage allotments of the farm program. It was reported, however, that the December 1 condition of the crop—87 percent—was unusually high.

A year earlier, condition was 84 percent—the highest since December 1930. The generally excellent condition of the crop was attributed to ample moisture and warm, open weather which continued the growth until a later date than usual. The early sown wheat, handicapped in some places by insufficient moisture, made good growth after rains came; much of the late sown wheat has had a longer than usual late growing season.

The Department added that present indications point to an abandonment of only 6.6 percent of the seeded acreage, as compared with 13.4 percent abandonment of the acreage seeded in the fall of 1940, and with a 10-year average abandonment of 19.2 percent. . . . Considering all factors, the 1942 winter wheat crop may total about 631 million bushels, or about 6 percent less than the 1941 crop of 671.3 million bushels, the Department said.

Acreage of rye seeded last fall was 6,289,000 acres, as compared with 6,182,000 acres in 1940.

COTTON: Record

Domestic cotton consumption continues to set new high records, further

increases are in prospect during the next few months. Basis is the increasing production of military goods, greatly stimulated now by the entry of the United States into World War II. Despite large supplies of raw cotton, prices in spot cotton markets of the South average about 75 percent higher than at this time last year. Besides the extraordinary demand for cotton goods, a strong price support is the 85 percent of parity loan to producers.

Domestic supply of cotton this season has been estimated at about 23 million bales, or nearly twice the volume of probable domestic consumption and exports. In the first year of entry of the United States in World War I (1916-17) the domestic supply of cotton was only 1¼ times consumption plus exports. Of the total supply of 23 million bales for 1941-42, about 7½ million bales are owned or held by the Government as collateral on loans to growers. The remaining, or so-called "free," supply is about 1½ times probable domestic consumption.

Less cotton has gone under Government loan this season than last—only 1½ million bales of the 1941 crop, through December 20, as contrasted with about 2½ million bales of the 1940 crop to the same time a year earlier. Farmers are reported to be holding a considerable proportion of the current crop with the aid of private loans.—FRANK GEORGE

GOALS FOR CANNERY CROPS IN 1942

National goals for the production of cannery crops in 1942 were announced at year's end by the United States Department of Agriculture. The goals: 40 million cases of canned tomatoes, 38 million cases of canned peas, 12.5 million cases of canned snap beans, 24 million cases of canned corn. The 1942 pack goals for these four leading canned vegetables combined exceed by approximately 15 percent

the 1941 record pack of these products.

The goal of 40 million cases of canned tomatoes is about a fourth larger than the 1941 pack, the 38 million cases of canned peas about a third larger than in 1941, the 12.5 million cases of canned snap beans is about the same as the 1941 pack, the 24 million cases of canned corn is about 2 million cases less than the record—

breaking pack of 1941. Secretary Wickard announced that special assistance will be given growers and canners in attaining the unprecedented production of canned tomatoes and canned peas required by the 1942 goals:

1. Establishment of prices at which the Department of Agriculture offers to purchase canned tomatoes and canned peas.

2. Establishment of fair minimum prices which canners should pay to growers of tomatoes and peas for canning before becoming eligible to sell these two products to the Department of Agriculture.

3. Helping growers in obtaining fair contracts with canners of these two vegetables.

4. Aiding cooperating growers and canners in obtaining materials and facilities for producing and canning these vegetables.

The Department of Agriculture, through the Agricultural Marketing Administrator, will purchase all quantities of 1942 canned tomatoes offered to it through December 31, 1942, and all quantities of 1942 canned peas offered to it through October 31, 1942, at base prices of:

- (a) 95¢ per dozen No. 2 cans, f. o. b. cannery, for U. S. Grade C canned tomatoes, and
- (b) \$1.10 per dozen No. 2 cans, Alaskas or Sweeties, f. o. b. cannery, for U. S. Grade C canned peas

provided that the canner making the offer in the case of both canned tomatoes and canned peas has been certified by USDA State Defense Boards as having agreed by contract with growers to pay at least the minimum price applying to their particular locality. Such minimum prices to growers shall be not less than \$5 per ton in the case of tomatoes for canning and \$17.50 per ton in the case of peas for canning over the comparable average 1940 prices found by the State Defense Board to have been paid to growers in its State or areas within the State.

In view of the close relationship between tomatoes for canning and tomatoes for products, the Defense Boards will recommend fair prices to

be paid by processors of tomato products in each State or areas thereof comparable to the prices determined for tomatoes for canning (at least the minimum of \$5 per ton over 1940 prices to growers in the State or area thereof). The Department contemplates no purchases of canned tomato products. Neither does it contemplate purchases of canned corn nor canned snap beans.

"We expect all canners to cooperate by contracting acreages to the full extent of their plant capacity and by making their contract prices to growers at least the minimum made possible by the program," Secretary Wickard said. "Moreover, each canner should plan his operations with the view to contributing his share of the supplies needed by the Department. Growers can assure themselves of securing fair prices for their 1942 production only by entering into specific contracts with cooperating canners. Growers entering into these contracts are expected to grow the necessary acreage. This too will prevent wastage which should be reduced to a minimum in the coming year." Growers and canners will be assisted by the Department in obtaining priorities for materials, equipment, and plant facilities required in the production and canning of the vegetables.

Full information concerning the operation of the program for canning vegetables will be supplied growers by the Agricultural Adjustment Administration and the Extension Service in order to assist them in obtaining fair contracts with canners and to insure that the required expansion in acreage of tomatoes and peas for canning will be in line with the canning facilities that are available in the various States and local areas within these States. Growers will be asked to expand acreage only where adequate canning facilities are available and where canners are contracting acreage for at least the minimum prices for canning tomatoes and peas determined by the State Defense Board.

In this program the State Defense Boards will (1) provide leadership in obtaining the necessary increases in acreage and the full utilization of available canning capacity so that each State makes its maximum contribution toward reaching the national goals; (2) recommend to the Department the separate producing areas within the State and fair minimum grower prices applicable to those areas; and (3) certify to the Department individual canners who have agreed to contract with growers for at least these minimum prices.

Stocks of canned tomatoes and peas purchased through the Agricultural Marketing Administrator under the program are intended to be used primarily for lend-lease purposes and for school-lunch distribution. In acquiring supplies, consideration will be given to civilian as well as other Government needs. The canned tomatoes and peas bought are not intended for sale in domestic commercial channels unless domestic commercial prices of these products rise unduly.

Farm Production for Victory

*FARMERS produced in 1941 the biggest volume of food in our Nation's history. Production will be further increased this year—production of milk, eggs, meats, fats, oils, vegetables—for us and our Allies. * * * Assurance is that prices will be supported by Government commodity loans, by purchases under Lend-Lease programs, by food distribution programs in the United States. Food is a front line of victory.*

SECRETARY Wickard said at year's end: "More than 6 million farm families of the Nation are now engaged in a Nation-wide program to produce Food for Freedom. In general—the 1942 production goals call for more milk—and we need to convert more of that milk into cheese, evaporated milk, and dried skim milk; we need more eggs, and more pork; we hope beef cattle raisers will market more of their cattle in 1942; we need more canned vegetables; we need more oil from peanuts and soybeans. At the same time, we need to hold down on our production of three important crops—wheat, cotton, and tobacco.

"We have great stores of wheat and cotton and tobacco on hand; so we're not going to spend labor—which in some sections will be scarce—and farm machinery of which the supply will be limited—and fertilizer and spray materials in producing commodities that we don't need to win the war. That would be wasteful. We

can't afford waste in these times. The same principles which guide the general agricultural planning need to guide our planning for home gardens. Home gardens on the farm enter into our agricultural goals for 1942. We hope for an increase of about a million and a third home vegetable gardens on the Nation's farms."

"A garden on every farm"—a total of 5,760,000 farm gardens—is part of the National Food-for-Freedom goals for 1942. Campaign is urging also the creation of community and school gardens, but cautioning against the conversion of city back yards, parks, playgrounds, or other land unsuited for the purpose into gardens.

"Defense gardens will be a vital part of the Food-for-Freedom program," Secretary Wickard said. "The defense garden program will release a larger amount of commercially grown vegetables for helping Britain and for improving the diets of people in our industrial centers."

TOTAL volume of agricultural production in the United States has increased at the rate of about 1 percent a year since 1909. From 1909 to 1926 the rate of increase was 1.5 percent annually. This upward trend was followed by a relatively stable level of production to 1931, and by a sharp decline in output during the drought years. But from 1935 to 1941 agricultural production again increased sharply, and in 1941 the production of farm products was the largest on record. Large reserves have been accumulated in the Ever-Normal Granary.

Production of both crops and livestock has followed a similar trend from 1909 to date, although production of crops has fluctuated much more from year to year than the production of livestock. Production of all crops increased from 81 percent of the 1935-39 average in 1909 to a record high of 117.4 in 1937, and totaled 109.4 percent in 1941. Production of all types of livestock and livestock and livestock products has tended upward since 1909—the index of production of all livestock increased from 78 percent of the 1935-39 average in 1909-10 to 115 in 1941.

Index Numbers of the Volume of Agricultural Production for Sale and for Consumption in the Farm Home, 1909-41

[1935-39=100]

Year	Crops						Livestock and livestock products				Total
	Grains	Fruits and nuts	Vegetables except truck crops	Truck crops	Cotton and cotton-seed	Total crops ¹	Meat animals	Dairy products	Poultry products	Total livestock and livestock products ²	
1909.....	110	52	93	31	75	80.9	93	64	69	78.2	79.2
1910.....	104	54	84	31	89	81.9	89	65	74	78.0	79.5
1911.....	93	66	76	31	117	85.0	95	66	79	81.7	83.0
1912.....	119	70	95	35	104	93.5	93	66	76	80.3	85.4
1913.....	98	54	82	34	107	83.8	92	68	76	80.5	81.8
1914.....	122	78	87	36	123	99.1	88	69	75	78.8	86.7
1915.....	135	73	86	35	86	94.6	92	70	79	82.0	86.9
1916.....	94	66	70	36	89	81.4	99	71	77	84.6	83.3
1917.....	111	57	100	39	87	87.9	99	72	74	84.5	85.8
1918.....	118	62	91	45	93	91.9	111	71	76	90.2	90.8
1919.....	122	64	82	42	87	91.3	108	74	81	91.0	91.1
1920.....	136	76	91	51	100	102.5	99	73	79	85.9	92.3
1921.....	119	49	83	43	60	80.1	97	76	81	86.2	83.8
1922.....	116	80	99	57	73	90.3	106	78	87	92.2	91.5
1923.....	113	82	93	56	76	90.7	114	81	92	97.8	95.0
1924.....	115	74	90	66	103	95.7	115	84	92	99.5	98.0
1925.....	112	74	79	74	122	99.1	107	85	94	96.7	97.6
1926.....	111	96	85	71	137	105.3	105	87	99	97.6	100.6
1927.....	119	70	96	74	99	96.3	105	89	103	99.0	98.0
1928.....	125	95	100	76	110	105.6	107	90	103	100.4	102.4
1929.....	107	73	90	87	113	98.1	104	93	102	99.8	99.1
1930.....	96	89	90	91	105	96.1	100	94	107	99.7	98.3
1931.....	103	98	98	83	127	104.5	103	97	102	101.1	102.4
1932.....	101	82	100	79	98	92.5	102	98	100	99.9	97.0
1933.....	73	81	93	76	98	84.7	106	98	101	103.9	96.4
1934.....	50	96	101	68	74	72.3	118	97	97	106.3	93.1
1935.....	85	95	104	92	81	88.9	90	97	93	98.1	91.5
1936.....	66	81	88	96	95	82.1	102	96	99	100.5	93.2
1937.....	114	113	107	102	144	117.4	96	99	101	98.1	105.6
1938.....	120	100	102	104	91	104.6	102	102	100	101.6	102.7
1939.....	115	111	99	106	90	106.9	110	103	107	106.8	106.9
1940 ³	116	106	105	109	97	106.9	118	105	106	111.3	109.6
1941 ⁴	130	116	106	109	84	109.4	120	111	114	115.8	113.3

¹ Includes tobacco, sugar crops, hay, peanuts, soybeans, cowpeas, and hops, and legume and grass seeds in addition to crops in group index numbers.

² Also includes wool and mohair.

³ Preliminary.

⁴ Tentative estimate.

PRODUCTION of grains fluctuated widely during the last 33 years, but showed no pronounced upward or downward trend. Production of cotton also fluctuated widely, and in the last 10 years averaged nearly 10 percent less than in the period 1909-14. But the production of truck crops has tripled, and of fruits and nuts doubled, since 1909. There was a pronounced increase in production of vegetables other than truck crops, of soybeans, peanuts, sugar crops, and tobacco.

Production of meat animals in 1941 was the largest on record—120 percent of the 1935-39 average. Production increased about 25 percent during the last 33 years, as contrasted with an increase of about 60 percent in the output of poultry products, and of 70 percent in production of dairy products. Production of all types of livestock has increased sharply since 1935. National goals call for further increases in production in 1942.

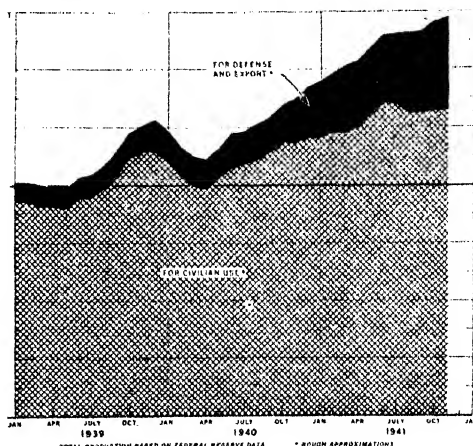
Industrial Production for Victory

BAE reported at year's end that the expanding war effort and the prospective accompanying rise in industrial activity, employment and wages are the principal factors in the favorable outlook for domestic consumer demand. In 1942 the proportion of processed goods for war and exports probably will increase, it was stated, to perhaps 40 percent of the total, and double the estimated 20 percent required for defense and exports in 1941. In 1940 about 10 percent of factory production was for defense or export.

THE accompanying chart shows the course of factory production in the United States—for civilian use, and for defense and export—during the last 3 years. Products for defense and export have represented an increasing portion of the total output of manufactures since the beginning of World War II; but production for civilian use also increased, until June last. Now, with the United States at war against the Axis, domestic economy will be shifted rapidly to a war basis; this means that production of war materials will be an increasing proportion of production for all purposes. (BAE pointed out that these estimates represent only rough approximations, but that they do give some indication of the growing importance of military production in relation to the total volume of factory output.)

BAE said: "Labor troubles will diminish, overtime work will be increased, additional shifts will be more fully utilized. Increased output of commodities such as lead and copper may be obtained by subsidizing or offering higher prices to marginal and

FACTORY PRODUCTION IN THE UNITED STATES, 1939-41



submarginal producers. * * * On the other hand, gains in industrial production will continue to be limited by the shortage of raw materials and the high rates of operation which already have been reached in many lines of activity.

" * * * It is estimated that defense and exports together are at present accounting for around 25 percent of the total output of processed goods, compared with about 15 percent a year ago. Exports now represent about the same proportion of factory production as a year ago, since increased Lend-Lease shipments have accompanied the rise in industrial output and have offset declines in exports of some kinds of goods. This means that the output of defense goods exclusive of Lend-Lease shipments apparently is now twice as large relative to factory production as it was a year ago.

"**F**URTHER increases in nonagricultural employment and consumer income (which seem likely to accompany the rising war effort) will be the principal factors in the improvement in the domestic demand for farm products. Curtailment of production of civilian goods such as automobiles, household equipment, and residences will tend to increase the proportion of funds available for other types of consumer goods and services—including food, clothing, and amusements. * * * An offsetting factor to the indicated increase in consumer income available for purchases will be the higher taxes in 1942. These may result in lowering net money income after taxes, for some of the higher income groups of consumers. Lower income groups will be little affected by the tax increases to date; it is this group which spends relatively large proportions of its income for food."

BAE estimated that in October 1941, nearly 43 million people were employed in nonagricultural work (exclusive of relief workers but including the military), as compared with slightly more than 38 million a year

earlier; that the compensation of these workers in October was at the annual rate of 63 billion dollars, compared with about 52 billions in October 1940. Continuation of the June to October (1941) rate of gain, it was stated, would carry nonagricultural employee compensation to an annual rate of about 70 billions by October 1942.

THE Office of Production Management issued a new farm machinery order at the beginning of the new year, providing the priority rating necessary for the manufacture of a supply of new farm implements and repair parts to supplement equipment now on farms for use in the production and harvest of 1942 crops. The order assigns to manufacturers of farm machinery a high defense rating, A-3, to enable them to produce approximately 83 percent of new machinery and about 150 percent of repair parts based on the 1940 level.

As a further help to farmers, OPM revised the Steel Warehouse Order, M-21-b, to provide a reasonably adequate supply of bale ties, nails, and wire rope. A new classification of special value to agriculture was created. It includes bale ties, nails, welding rod (uncoated), and wire rope with an A-9 rating provided to secure delivery of 100 percent of the amount supplied in the corresponding quarter of 1940. The warehouse may secure up to 140 percent if supplies are available, but the priority only extends to 100 percent.

Wire, woven fence wire, poultry netting, stucco netting, barbed wire, staples, fence posts and gates, tin andterne plate (short ternes), galvanized sheet and strip are protected by the A-9 rating up to 70 percent, with a maximum 110 percent allowed. The Department of Agriculture pointed out that farmers themselves do not need priority ratings to secure items covered either in the Warehouse Order or Farm Machinery Order, but should obtain their supplies from usual sources.

Trade Agreement with Argentina

THE United States and Argentina concluded, on October 14, 1941, a reciprocal trade agreement that provides for: (1) establishing a firmer and more satisfactory basis for future economic and other relations between the two countries; (2) strengthening the economy of each country and facilitating its efforts toward defense of the Western Hemisphere; and (3) helping each country to obtain from the other the products which it needs, especially for defense purposes, and to market its own exportable products in the other country.

The agreement, signed at Buenos Aires, is the twelfth to be negotiated under the authority of the Trade Agreements Act between the United States and Latin American countries exclusive of supplementary agreements. It is the first commercial agreement to go into effect between the United States and Argentina since 1853, and its beneficial effects in terms of hemispheric solidarity are regarded, both in this country and in Argentina, as highly important.

The agreement was proclaimed by the President of the United States on October 31, 1941, and entered into provisional effect November 15, 1941. It will remain in force for an initial period of 3 years unless terminated earlier under special conditions stipulated in the agreement itself. If neither country gives notice, 6 months before the end of the 3-year period, of its intention to terminate the agreement, it will remain in force indefinitely thereafter, subject to termination by either country on 6 months' notice and subject to the special conditions previously mentioned.

THE Argentine pact not only covers the reduction of excessive tariff rates and the binding of other rates against increase during the life of the agreement, but also provides for the

mitigation of other trade barriers, such as exchange and quota limitations on imports, and includes undertakings by each country for the equitable and non-discriminatory treatment of imports from the other.

These undertakings constitute an approach to sounder and more satisfactory economic relations between the two countries in the future, since both subscribe to the principle of unconditional most-favored-nation treatment. At the same time the agreement, recognizing the existence of certain situations due largely to the war which must be met realistically, provides for certain exceptions to the application of the most-favored-nation policy. The United States makes its usual exception with regard to the special customs relations between this country and Cuba, which have existed since 1902, while Argentina makes an exception in the case of special arrangements between itself and certain neighboring South American countries.

Argentine restrictions on United States exchange were somewhat relaxed in the period between July 1, 1941, and the signing of the agreement on October 14. The Argentine Government has given assurance in the agreement that it will accord to the United States full most-favored-nation treatment in this regard when it is once more able to convert its blocked sterling balance into free currencies and when, at the end of the war, certain temporary exchange advantages now accorded to contiguous countries and to Peru have been terminated. In connection with the agreement Argentina has also given assurance that it will make exchange available, at least in limited amounts, for every United States product on which it has made a tariff concession in the agreement. Since signing the agreement the Argentine Government has made some further relaxations in its exchange re-

strictions affecting imports from the United States.

UNDER the agreement the Argentine Government reduces its tariff rates on commodities of which the value of United States exports to Argentina in 1939 was \$19,327,000 and in 1940, \$19,354,000. Present Argentine rates are bound against increase with respect to commodities of which the United States exports to Argentina were valued at \$13,809,000 in 1939 and at \$12,752,000 in 1940. The full list of products on which the United States obtains concessions from Argentina accounted for 47 percent of this country's total exports to Argentina in 1939 and for 30 percent in 1940. By 1940, the effects of the war upon the Argentine economy had resulted in sharp reductions in Argentine purchases of certain commodities on which concessions are granted to the United States in the agreement.

United States tariffs are reduced, in the agreement, on Argentine products of which this country's imports were valued at \$37,220,000 in 1939 and at \$35,072,000 in 1940. United States tariffs bound against increase in the agreement, including bindings on the free list, cover imports which were valued at \$16,504,000 in 1939 and at \$24,876,000 in 1940. Thus, United States concessions cover commodities accounting for 93 percent of this country's imports from Argentina in 1939, and for 75 percent in 1940. The proportion declined in 1940 largely because of greatly expanded United States purchases from Argentina of apparel wool of grades on which no concession is included in the agreement.

ARGENTINE tariff rates on United States agricultural as well as industrial products are reduced in the agreement. The reductions are of three types: (1) those which came into full effect on November 15, 1941; (2) those which became effective in part on that date and which will become completely effective under "Stage II"

of the agreement, that is, when Argentine customs receipts from import duties exceed 270 million pesos in any calendar year; (3) those which will become effective only when "Stage II" comes into force. The third group includes only five of the 39 tariff reductions contained in the agreement.

All Argentine tariffs which are to be reduced in future under this arrangement are in the meanwhile bound against increase and all tariff bindings included in the agreement became fully effective on November 15. The purpose of the two-stage arrangement for Argentine tariff reductions is to avoid a serious curtailment of Argentine national revenue, a large proportion of which is derived from customs receipts.

The most important foodstuffs which the United States exports to Argentina are fresh and dried fruits. In the agreement Argentina reduces its tariff on fresh apples, pears, and grapes, by 50 percent on a seasonal basis. Its tariff on prunes is reduced by 30 percent and that on raisins by 35 percent. Existing favorable rates on dried apples, peaches, and pears and on cherries and walnuts are bound in the agreement. All tariff reductions on fruits became fully effective on November 15.

Argentine tariffs on canned salmon and canned mackerel are reduced by 40 percent and on sardines by 30 percent, both reductions becoming effective on November 15.

Present moderate Argentine tariff rates on leaf or cut tobacco and on cigarettes are bound in the agreement. There is a growing demand in that country for light-tobacco cigarettes.

SOME Argentine tariff reductions on nonagricultural imports from the United States became effective on November 15, others became partly effective on that date and will become fully effective under "Stage II" of the agreement, and still others will go into effect only under "Stage II." In-

cluded among the nonagricultural concession items are numerous classifications of automobiles, parts, and accessories; radio and other electrical apparatus; automatic refrigerators; agricultural and industrial machinery; and office appliances. Forest products on which the United States obtained concessions include lumber of specified species, plywood, casks, composition board, paper products, and naval stores. Chemicals, paints and related products, motion-picture films, and a long list of miscellaneous articles are numbered among the concession items.

The concessions obtained from Argentina will not only assist United States exporters to sell their products in that country, but will help Argentine citizens to obtain United States goods which they need and which in some cases they are no longer able to obtain from European countries because of the war.

THE principal commodities on which United States tariffs are lowered under the agreement are flaxseed, certain grades of wool, canned beef, cattle hides and skins, casein, tallow and oleo products, neatsfoot oil and stock, quebracho extract, and certain other less important commodities.

Imports of flaxseed, principally from Argentina, have, in recent years, accounted for from 29 percent of United States crushings in 1930 to 86 percent in the drought year 1936. They amounted to 31 percent in 1940. This country's consumption of linseed oil is now at the highest level on record as a result of building and industrial activity stimulated by the defense program. At the same time there is a scarcity of certain other imported oils. Transportation costs for flaxseed imports from Argentina are much higher than they were before the war. A tariff reduction of 50 percent, to 32½ cents a bushel, to be in effect for the duration of the abnormal situation in the flaxseed trade,

tends to offset these higher transportation costs. After the present emergency has passed, the rate on flaxseed under the terms of the agreement may be raised to 50 cents a bushel. This rate would be a reduction of 23 percent from the pre-agreement rate.

UNITED STATES civilian consumption of canned corned beef is ordinarily supplied almost wholly by imports, since the relatively limited domestic production is practically all for Government contracts. Increases in the armed forces of the United States combined with higher consumer buying power in this country, have expanded the demand for canned beef imports, practically all of which are canned corned beef. Yet these imports of canned beef have, on the average, been equal in the period 1935-39, to only 2.6 percent (dressed-weight basis) of domestic production of beef and veal. The United States tariff on canned beef is reduced in the agreement from 6 cents per pound, but not less than 20 percent ad valorem, to 3 cents per pound, but not less than 20 percent ad valorem.

Under the Argentine agreement, United States tariffs on certain coarse wools, used principally in overcoatings and blankets, have been reduced. Domestic production of these grades represents an infinitesimal proportion of total United States wool production and this country's wool consumption in 1941 is reported to be the highest for any year on record.

United States needs for leather goods regularly require imports of cattle hides and skins of certain grades of which domestic production is insufficient. Military requirements for shoes and other leather equipment have been added to an expanded civilian demand. The United States tariff on cattle hides and skins is reduced in the agreement from 10 percent ad valorem to 5 percent ad valorem.

IN addition to the above-named concessions, the United States grants

seasonal reductions of 50 percent in its tariffs on fresh grapes, plums, prunes, and asparagus. These concessions will assist United States consumers to obtain these products at more reasonable prices during the off-seasons when United States crops are not being marketed in volume. Existing United States tariff rates on fresh pears, alfalfa seed, processed maté, glycerin, and mica are bound against increase. In notes exchanged at the time of the signing of the agreement the Argentine Government commits itself in principle to voluntary limitation of the quantity of fresh pears to be shipped to the United States from that country during 1942, and proposes that arrangements for such limitation be discussed by the joint commission to be established under the agreement.

Still another group of products on which United States tariffs are reduced

or bound includes commodities which this country usually obtains principally from countries other than Argentina but which are no longer obtainable from usual sources because of the war. Depending upon circumstances, these concessions may be terminated by the United States after the war. Cheese of certain specified Italian types is the principal commodity in this group on which a tariff reduction has been made. Other products in this group on which tariffs have been reduced or bound under the agreement are: Medicinal preparations of animal origin; beryllium oxide and carbonate; sunflower oil; canned anchovies; macaroni and similar alimentary pastes; canned tomatoes; brandies, wines, bitters, and liqueurs; and certain dressed furs and furskins.

VERNON E. BUNDY,
Department of State.

Fewer, Bigger Farms

FARMS in the United States decreased in number but increased in size during the last 10 years. Total land in farms is larger than in 1930. The agricultural census put the number of farms at 6,096,799 in 1940, as compared with 6,288,648 in 1930. The average size of farms was 174 acres in 1940, as contrasted with 157 acres in 1930. Total land in farms was 1,060,852,374 acres in 1940, as compared with 986,771,016 acres in 1930.

* * *

Farm population increased during the first half of the decade, then decreased; the total of 30,475,206 in 1940 compares with 30,445,350 in 1930. States having largest farm population include Texas (2,165,611 people in 1940), North Carolina (1,654,123), Mississippi (1,405,749), Georgia (1,369,719), Alabama (1,344,349), Tennessee (1,276,437). Other States

having more than 1,000,000 of farm population include Ohio, Missouri, Kentucky, and Arkansas.

* * *

The number of full-owner farm operators increased during the decade (from 2,911,644 in 1930 to 3,084,138 in 1940), and the number of part-owners decreased (from 656,750 in 1930 to 615,099 in 1940). The number of tenants decreased from 2,664,365 in 1930 to 2,361,271 in 1940, a large part of this decrease being in the number of share croppers (from 776,278 share croppers in 1930 to 541,291 in 1940).

* * *

Sixty years ago, about 26 percent of all farms in the United States were operated by tenants. The proportion increased during the next 50 years; in 1930 about 42 percent of the farms were operated by tenants. In 1940, the census showed that about 39 per-

cent of the farms were operated by tenants. Much of the decrease during the last decade was a change in the status of many sharecroppers in the South to "wage hands," "resident laborers," or regular farm laborers.

* * *

Census returns indicated there were

1,500,000 tractors on farms in 1940, as contrasted with 1,000,000 in 1930; that the total number of horses and mules, 27 months old and over, decreased from 17,611,905 to 13,028,863 during this 10-year period. Seventy-four percent of all farms had milk cows in 1940, 62 percent had hogs and pigs, 85 percent, poultry.—F. G.

Farmer's Share of the Consumer's Dollar

For a number of years the Bureau of Agricultural Economics has been studying the spreads between farm and retail prices of 58 foods, analyzing the changes in techniques and costs of food distribution, recommending ways of securing greater efficiency in the production and distribution of foods. These price and service studies have been of value in the development and administration of farm programs in recent years; they are being expanded now in this period of war emergency and price control to cover a larger number of foods in the American dietary. Studies are being made also of farm to retail price spreads on commodities such as cotton, wool, and tobacco.

The accompanying article brings to date the price margins on 58 foods, and shows the changes which have occurred during the first two years of World War II. Presented also is a brief analysis of mill margins in the manufacture of cotton goods. Results of studies of farm-to-retail price spreads of cotton, wool, and tobacco will be reported as they become available, in coming issues of *THE AGRICULTURAL SITUATION*.—Ed.

FOOD Retail prices of food have advanced sharply since the spring of 1941, with most of the increase going to farmers.

The rise in retail prices followed an 18-month period of stable food prices after the beginning of war in Europe in September 1939; the increase in prices since March 1941 has been the result

of pronounced increases in industrial production, employment, and labor earnings.

Tables 1 and 2 show the changes in farm prices, retail prices, and margins covering 58 foods bought by the average workingman's family during World War I, the late 1930's, and in selected months of the last 3 years. They show that the cost to consumers of the 58-food basket averaged \$342 in 1941, an increase of \$28 or 9 percent above 1940 and of \$10 or 3 percent above the average of the 5 years preceding World War II. The 1941 level of retail prices of these domestic food products was the same as for 1936 and was 3 percent below the cost in 1937.

Retail cost of the 58 foods rose from \$321 in March 1941 to \$365 in November, an increase of nearly 14 percent within 8 months. The Bureau of Labor Statistics reports that by mid-October 1941, city workers' costs of living had risen more than 9 percent above the pre-war 1935-39 average. In this increase, foods costs were higher by 12 percent and clothing costs were up 13 percent.

In November 1941 the combined retail value of all 58 food items was about 17 percent higher than in November 1940. During the year, retail prices of most individual food items increased, but in varying degree. The group of important pork products including lard rose 35 percent at retail while beef cuts showed a negligible change. Although pork was high as compared with 1940, its retail price

was almost identical with the pre-war 5-year average for 1935-39. Dairy products as a group rose more than 16 percent from November 1940 to November 1941 and eggs at 52 cents per dozen were up 28 percent, both items showing even greater increases above the 1935-39 level. White bread at 8.6 cents per pound was up 10 percent over November 1940, while white potatoes were up about 37 percent.

MOST of the increase in retail prices during 1941 was passed back to farmers in higher farm prices, the price spread or marketing charge absorbing a relatively small proportion of the increase. (Charges for marketing include costs and profits of marketing agencies and are equal to the spread between prices paid by consumers for products at retail and payments to farmers for equivalent quantities of farm produce. The farm to retail spread includes charges for all marketing services between farmers and consumers, for local

assembly, transportation, storage, processing, and wholesale and retail distribution.)

Marketing charges as measured by the margin for the 58 foods declined from \$182 in 1940 to \$179 in 1941. The downward trend in margins has persisted since 1937. The 1941 margin was 6 percent below the pre-war 1935-39 average of \$191. The shrink in the margin from 1940 to 1941 meant that the \$28 increase in consumer spendings for food was passed back to the farmer in full plus a \$3 reduction in margins, yielding a \$31 increase in farm value, which rose by 23 percent from \$132 in 1940 to \$163 in 1941. But from September through November last year most of the \$8 rise in retail value was absorbed by higher margins.

Labor costs are probably the largest single item of expense in marketing. Table 3 shows the recent course of hourly earnings in the marketing of food and fiber products of the farm. Hourly earnings in food marketing were 10 percent above pre-war by September 1941 and were 5 percent above 1940.

Table 1.—Annual Family Purchases of 58 Foods

Year	Cost at retail	Paid to farmers	Marketing margins	Farmers' share of retail value
	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Percent</i>
1913	252	134	118	53
1914	258	137	121	53
1915	258	134	124	52
1916	285	155	130	54
1917	370	223	147	60
1918	424	245	179	58
1919	470	267	203	57
1920	514	272	242	53
1921	404	179	225	44
1929	415	195	220	47
1932	270	88	182	33
1935 ¹	331	138	193	42
1936	342	152	190	44
1937	353	160	193	45
1938	321	130	191	40
1939	311	126	185	41
1935-39 average ¹ ..	332	141	191	42
1940	314	132	182	42
1941 ²	342	163	179	48

Table 2.—Annual Rate of Family Purchases of 58 Foods for Selected Months of 1939-41

Year and month	Cost at retail	Paid to farmers	Marketing margins	Farmers share of retail value
	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>	<i>Dollars</i>
1929	415	195	220	47
1935-39 Average ¹	332	141	191	42
1939—Aug	303	118	185	39
Sept.	319	134	185	42
1940—Mar.	313	120	185	41
Sept.	314	132	182	42
Nov.	313	130	174	44
1941—Mar.	321	141	180	44
Apr.	327	151	176	46
May	331	153	178	46
June	345	161	184	47
July	348	171	177	49
Aug.	348	173	175	50
Sept.	357	182	175	51
Oct.	361	180	181	50
Nov.	365	183	182	50

¹ No allowance is made for processing taxes on these food products amounting to about \$11 in 1935.

² Preliminary estimates.

Basic price data from U. S. Bureau of Labor Statistics and the Agricultural Marketing Service. 58 retail items combined in quantities representing annual purchases by a typical working man's family.

Transportation charges also are an important part of marketing cost. The recent wage rate increase granted to railroad employees will probably raise average hourly earnings on steam railways by at least 10 percent. But it does not necessarily follow that this increase will be or should be translated into correspondingly higher rates on farm products. Some students of prices and costs point out that the increase in net income of class I railways from late 1940 to 1941 exceeds the prospective increase in the compensation of railway employees.

VARIOUS reasons are given for the decline in food marketing margins in the face of rising wage costs in processing, transportation, and distribution in recent years. One is that the supermarket and its influence upon the whole field of competitive food distribution have effected important economies in the retailing of foods. One of these economies is a reduction in labor requirements, or rather a change in the distribution of labor whereby much labor formerly employed in retailing is now performed by the purchaser of foods.

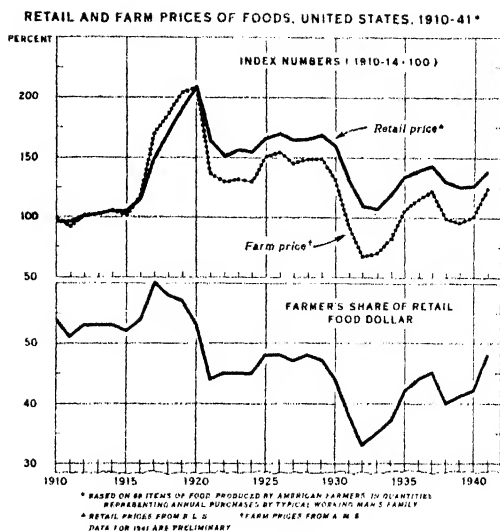
It is pointed out also that labor pro-

TABLE 3.—Hourly Earnings in Marketing Enterprises, Indexes, 1935-39=100

Year and month	Food processing	Steam railways	Retailing	Food marketing ¹	Cotton goods processing
1935.....	91	96	97	95	97
1936.....	92	96	97	96	95
1937.....	102	99	103	102	106
1938.....	106	105	101	103	102
1939.....	108	104	102	104	100
1940.....	110	105	101	105	106
September 1941..	115	104	106	110	124

¹ Weighted composite of earnings in food processing, steam railways, wholesaling, and retailing.

U. S. Bureau of Labor Statistics and the Interstate Commerce Commission.



ductivity has increased more rapidly than wage rates in the processing industries, with a consequent reduction in labor costs per unit of product. Despite refinements in processing and packaging foods, the total cost per unit may be less than it was a decade or so ago. The volume of national food production also has increased steadily since 1935, permitting fuller utilization of capacity by marketing agencies.

Another consideration is that farm and retail prices in any one month are not strictly comparable since many foods sold are processed from commodities bought from farmers weeks and in some cases months earlier. Thus, on a rising market the actual spread between farm and retail prices of identical foods may be much wider than appears from price comparisons within any one month. When prices are rising, dealers who mark up sales prices over actual cost and who carry sizeable inventories are able to show narrower margins between current sales prices and current replacement costs. This provides an incentive to build up inventories and take a higher mark-up over cost. There is evidence that manufacturer's and dealer's stocks of food products were much larger in

late summer than in early spring of 1941.

ALTHOUGH food costs rose appreciably during 1941 they remain considerably below food costs in the so-called "prosperity" years of 1920 and 1929. In September 1941 a workingman's family could purchase the basket of 58 foods for \$357. The same foods cost \$415 in 1929 and \$514 in 1920. The rate of annual earnings per employed factory worker was higher in September 1941 than at the prosperity peaks of 1920 or 1929. In September the typical factory worker's earnings were 15 percent higher than the 1929 average while the food basket could be purchased at a reduction of \$58, or 14 percent; and the worker's rate of annual earnings was 10 percent higher than the 1920 prosperity peak following World War I, yet cost of the food basket was \$157 less than in 1920, a difference of 30 percent in food outlay.

COTTON In contrast with food price margins, available figures show that mill margins taken by processors over a representative group of unfinished cotton textiles rose to the highest levels in 17 years of

record during early 1941. Beginning in May 1941, the Office of Price Administration placed ceilings on prices of cotton mill products. In October a new policy was adopted fixing in effect a ceiling on the mill margin, thus insuring that any further rise in prices of mill products should be reflected in full in prices of lint cotton. The margin ceilings have been set near the 1941 record highs.

Prices of cotton products have risen much more rapidly than prices of other textile products as a group. From October 1940 to October 1941 the wholesale price index of cotton goods rose by 47 percent, while wholesale prices of woolen and worsted goods rose by 19 percent. Mill consumption of both cotton and wool are at record high levels requiring third-shift mill operation in certain classes of products.

Mill margins taken by spinners and weavers of cotton grey fabrics rose during 1941 to the highest levels on record. Table 4 lists comparable wholesale values of cotton and cloth per pound of lint cotton. During 1941 the cotton processing margin rose to levels about 2 cents higher than the previous maximum for 1925-40. Mill consumption of cotton is being maintained at record levels which tax the capacity of processing plants. During November cotton spindles were active on the average about 104 hours per week, compared with 85 hours a year earlier. The high level of capacity utilization should afford reductions in per unit overhead costs. As shown in table 3, hourly earnings in cotton processing rose by September 1941 to 24 percent above the pre-war 1935-36 level. Until 1940, physical productivity per man-hour in cotton mills was rising more rapidly than hourly earnings so that labor costs per unit of product were decreasing. At present levels of output it is possible that labor productivity has declined.

Table 4.—Cotton Products: Mill Margins and Prices Received by Farmers

Year and month	Farm price per pound of lint	Wholesale cotton per pound of lint	Wholesale cloth value	Mill margin
	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>	<i>Cents</i>
1935-39 average ¹	11.1	11.8	24.7	12.9
1940	9.6	10.3	22.5	12.3
1941—Jan.	9.4	10.2	25.2	14.9
Apr.	10.4	11.2	31.0	19.8
July	14.3	15.6	34.7	19.2
Oct.	16.6	16.6	37.1	20.4
Nov.	15.8	16.5	36.8	20.3

¹ 4 cents processing tax per pound of lint cotton was added to the farm prices and the wholesale price for 1935.

Agricultural Marketing Service.
Wholesale cloth values and mill margins are simple averages for 17 unfinished constructions per pound of lint cotton.

R. O. BEEN.

Income of Typical Dairy Farms, Wisconsin

THE purchasing power of net farm income of typical dairy farmers in Wisconsin has been above 100 percent of 1910-14 in 20 of the past 32 years.¹ During the period 1935-41 the purchasing power of these farmers averaged 115. This has been accomplished only by doing more business in recent years. These farmers now handle larger herds and know how to breed and cull for herd improvement. The dairy enterprise is the major factor affecting their operations and the resulting income. From 1937 to 1939, income from dairy products, cattle, and calves represented about 75 percent of the gross income on typical dairy farms in this region.

An increasing portion of the gross income of these farmers has been coming from the dairy. In part, this increased emphasis may be due to attempts to increase volume as a means of maintaining income in spite of lower prices; or, in part, it may be merely a reflection of the advantage that dairying holds over other enterprises in this region.

From 1916 to 1929, the prices of dairy products were relatively high. This favorable situation induced farmers to increase their size of herd and production per cow. The typical Wisconsin dairyman increased his herd from 13 head in 1910 to 16 head in 1929, and production per cow from 5,400 to 6,300 pounds.

Prices of dairy products, like prices of most farm products, declined after 1929 and in 1932 were the lowest in the entire 32-year period. In spite of lower prices, the number of dairy cows

in the typical herd continued to increase until 1934, although farmers did reduce the quantity of feed per milk cow and relaxed in their culling of cows and in the selection of sires. The average production per cow milked declined from 6,300 pounds in 1929 to 5,600 in 1934.

Prices began to strengthen in 1934, and the production per cow gradually increased until, in 1940, it was approximately equal to the record high of 1929. (Increasing production per cow through better breeding is a long and slow process and progress is not maintained during protracted periods of low prices. It appears that breeding is not the quick way to increase milk production per cow, but short-time increases have been made in most herds by careful selection of new cows, culling, heavier feeding and better management.)

THROUGH the years covered by this study, changes in farm organization and prices have been reflected in farm income. With the increase in demand for dairy products in World War I and the resultant high prices the index of net farm income rose from 103 percent of the 1910-14 average in 1915 to a high of 280 in 1919. The post-war depression brought the index down to 133 in 1921 and 1922. It recovered from 1924 to 1929, and in this period stood at slightly more than 190 percent of the 1910-14 base. An increase in the number of cows, a higher production per cow, together with an average of \$2.00 per cwt. for whole milk at condenseries, were the principal factors in this recovery.

Unfavorable prices and reduced amounts of roughage produced on the farms because of low yields caused by the drought brought the index to less than 60 in 1933. A combination of comparatively high yields of both

¹ Net farm income as used here is the amount of money which the farm operator receives from farm operations during the calendar year to compensate himself and unpaid members of the family for services rendered on the farm and for the farmer's own investment. Account is taken throughout the period of changes in technology, efficiencies in production, mechanization, size of farm and organization.

grains and roughage, and increased production of high quality roughages, together with heavier feeding and increased output per cow, resulted in an index of net farm income of 145 during the period 1935-41.¹ The number of milk cows in the herd was slightly less and the price of milk somewhat higher in this period than during the depression period 1930-34. The price of milk in 1935-41, however, was only 3.5 percent higher than in 1910-14.

ALTHOUGH the size of farm and the acreage in crops have remained practically unchanged over the 32-year period, there has been quite a change in the kind of crops grown. The acreages in corn silage and hays, particularly alfalfa hay, have increased materially since 1910. In 1910-14 the typical dairy farm had about 17 acres in hay whereas in 1937-39 it had nearly 23 acres. The typical dairy farmer has more than doubled silage production since 1910-14.

The typical dairy farmer in Wisconsin now has six times more acreage in alfalfa than he had thirty years ago. The increase in alfalfa hay on the farm has resulted in an increase in yield and quality of all hay. In 1937-39 total hay production was 45.7 percent greater than in 1910-14 and 21.6 percent greater than in 1928-32.

The typical Wisconsin dairy farmer normally attempts to produce all the farm-grown feeds required. But periods of low yields and production are not infrequent, and the farmer is forced to buy feeds or alter his farming operations. If the period is of long duration it may mean a total reduction in amount of feed fed and a reduced output of milk. (A similar situation occurred in the period 1930-34.) On the other hand, if yields of certain crops are low in a given year while yields of other crops are high in the same year a shift in amounts of each fed may be made; or if prices are favor-

able, purchases of feeds, particularly commercial feeds, may assume considerable proportions and production of milk maintained. Generally around 20 percent of farm expenditures is for feeds.

PURCHASING power of net farm income is a ratio, expressed as a percentage of the index of prices Wisconsin farmers pay for commodities used for family maintenance to the index of net farm income, both based on 1910-14 as 100. The index of purchasing power of net farm income over the 32 years covered has averaged 104.8 percent of the average 1910-14. It averaged 118.7 from 1924 to 1929 and 67.8 from 1930 to 1934. Since 1934 it has averaged 115.4 percent.

The typical farm operator now has a higher income level than in 1910-14, but has maintained this position only by doing more business. The increase in his business can be estimated from the increase in number of milk cows.

Organization of Typical Dairy Farms Wisconsin—1937-39

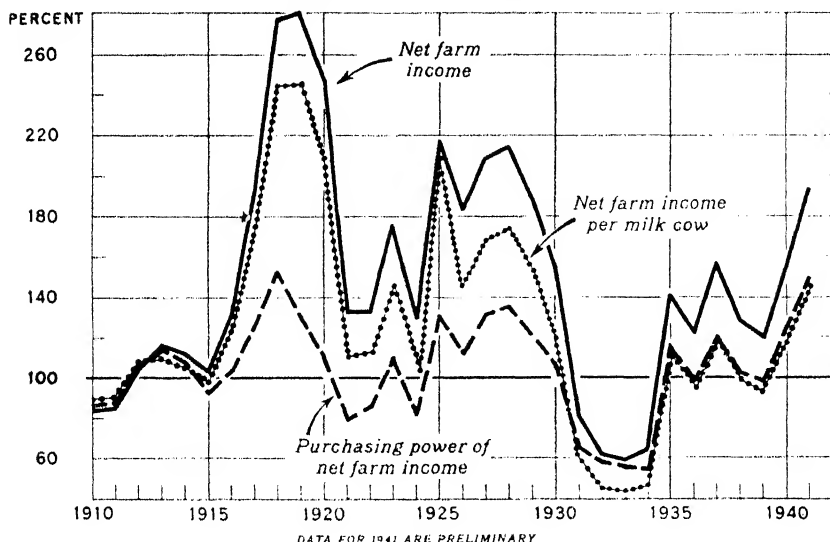
	<i>Average 1937-39</i>
Land in farm, acres	113.3
Land cultivated, acres	84.9
Percentage of farm cultivated	74.9
Corn for grain, acres	9.7
Corn for silage, acres	11.1
Oats, acres	20.8
Other small grain, acres	10.7
Hay, acres	22.8
Rotation pasture, acres	6.5
Garden, orchard & truck, acres	3.3
Permanent pasture, acres	17.4
Farmstead, roads & waste, acres	11.0
Milk cows, number	17.3
Hogs produced (hundredweight)	26.8
Laying hens, number	89.0
Horses, number	3.2

Proportion of Gross Income from Various Sources

<i>Item:</i>	<i>Percent of total</i>
Dairy products	58.7
Cattle and calves	14.4
Hogs	8.8
Poultry	1.7
Eggs	5.8
Crops	6.6
Other	4.0
Total	100.0

¹ The index in 1941 is based on milk at \$1.91 per cwt.

**TOTAL NET FARM INCOME, PURCHASING POWER OF INCOME, AND
INCOME PER MILK COW, TYPICAL DAIRY FARMS, WISCONSIN, 1910-41**
INDEX NUMBERS (1910-14=100)



By this criterion, the 1937-39 farm plant was 30 percent larger than the 1910-14 farm plant. (No material change occurred in either crop acres or total acres per farm throughout the 32 years). A rough measure of where the farmer's income position would be if he had not increased his business can be obtained by estimating the changes in farm income per cow. This can be approximated by dividing the index of net farm income by the index of num-

ber of milk cows per farm both based on 1910-14. The index of net farm income per milk cow per farm has been below the index of net farm income in every year since the base period, because the number of milk cows per farm has been higher throughout the period than in 1910-14. From 1935 to 1941 the income per cow was 111 percent of the 1910-14 base, while the index of net farm income stood at 145.

WYLLIE D. GOODSELL.

FOOD STOCKS: Up

Year-end stocks of agricultural products used wholly or in part for food bulked larger than at the end of 1940. Larger stocks of wheat and corn, pork, chickens, fluid milk and cream, condensed and evaporated milk, butter, cheese, sweetpotatoes, and dry edible beans were reported; smaller stocks of rice, beef and veal, turkeys, eggs, lard and other edible fats and oils, and potatoes.

In a year-end survey of the food situation, the Department of Agriculture said that total supplies of food in the United States are the largest on record,

and are expected to reach a new high level in 1942. Good crops in 1941 and large Ever-Normal Granary supplies have built up large stocks of foodstuffs and feedstuffs, it was stated. Supplies of high-protein feeds, grain, and hay were reported as larger than a year ago.

The supply of feed grains is the biggest in 20 years, the Department said. The number of livestock on farms is increasing, and probably is about 5 percent larger than a year ago. With average pasture conditions, a material increase in livestock production is expected in 1942.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of industrial workers (1935-39 = 100) ²	Cost of living (1935-39 = 100) ³	Wholesale prices of all commodities ⁴	1910-14 = 100			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in—				
					Living	Production	Living and production		
1925	90	126	125	151	164	147	157	176	270
1926	96	131	126	146	162	146	155	179	271
1927	95	128	124	139	159	145	153	179	277
1928	99	127	123	141	160	148	155	179	279
1929	110	134	122	139	168	147	153	180	281
1930	91	110	119	126	148	140	145	167	277
1931	75	85	109	107	126	122	124	130	253
1932	58	59	98	93	108	107	107	96	219
1933	69	61	92	96	109	108	109	85	187
1934	75	76	96	109	122	125	123	95	178
1935	87	87	98	117	124	126	125	103	180
1936	103	100	99	118	122	126	124	111	182
1937	113	117	103	126	128	135	130	126	187
1938	89	91	101	115	122	124	122	125	186
1939	108	105	99	113	120	122	121	128	190
1940	123	119	100	115	121	124	123	126	...
1940—December	139	135	101	117	122	125	123	...	...
1941—January	140	138	101	118	...	...	123	124	...
February	144	139	101	118	...	...	123	...	...
March	147	141	101	119	124	125	124	...	...
April	144	142	102	121	...	...	124	138	...
May	154	157	103	124	...	...	125	...	...
June	159	167	105	127	129	128	128	...	...
July	160	173	105	130	...	...	130	160	...
August	160	174	106	132	...	...	133	...	...
September	161	177	108	134	136	135	136	...	...
October	163	178	109	135	...	...	139	165	...
November	167	181	110	135	...	...	141	...	...
December	...	...	...	137	...	...	143	...	...

Year and month	Index of prices received by farmers (August 1909-July 1914 = 100)							Ratio prices of received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	
1925	157	177	172	153	140	153	163	156
1926	131	122	138	143	147	152	159	145
1927	128	128	144	121	140	155	144	139
1928	130	152	176	159	151	158	153	149
1929	120	144	141	149	158	157	162	146
1930	100	102	162	140	133	137	129	126
1931	63	63	98	117	92	108	100	87
1932	44	47	82	102	63	83	82	66
1933	62	64	74	105	60	82	75	70
1934	93	99	100	103	68	95	89	90
1935	103	101	91	125	118	108	117	108
1936	108	100	100	111	121	119	115	111
1937	126	95	122	123	132	124	111	121
1938	74	70	73	101	114	109	108	95
1939	72	73	77	105	110	104	94	93
1940	85	81	79	114	108	113	96	98
1940—December	81	79	75	93	111	128	132	101
1941—January	84	80	78	117	130	121	100	104
February	81	80	80	156	130	118	90	103
March	84	82	83	134	129	118	90	103
April	90	88	89	161	137	121	101	110
May	93	98	89	146	138	124	107	112
June	96	107	97	146	144	126	118	118
July	98	121	93	130	154	132	127	125
August	99	128	100	133	158	135	130	131
September	106	150	89	145	166	140	141	139
October	101	144	107	164	157	145	146	139
November	103	136	98	147	151	148	157	135
December	112	138	98	156	160	148	153	143

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Adjusted for seasonal variation. Revised November 1941.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

TO WIN THIS WAR THE AGRICULTURAL • SITUATION •

FEBRUARY 1942

A Brief Summary of Economic Conditions

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REVISED GOALS FOR FARM PRODUCTION IN 1942 substantially larger than the high record output called for in the goals set up last Autumn have been announced by Secretary Wickard. New policies with regard to loans, purchases, and sales of Government-held stocks also announced are designed to stimulate the production of maximum supplies of the commodities needed most in this war effort.

Secretary Wickard said: "The new 1942 goals call for the greatest production in the history of American agriculture. They call for putting every acre of land, every hour of labor, and every bit of farm machinery, fertilizer, and other supplies to the use which will best serve the Nation's wartime needs."

The Secretary added: "To American farmers, the Nation looks for enough production this year to feed and clothe our own people for their wartime task. To American farmers the United Nations look for indispensable supplies of food and fiber for their people and fighting forces.

"No one can foresee the exact size of the needs of our allies a year from now, but already we know they will be large, and I fear they will be larger than we realize at this time."

HARD TASK Continuing, the Secretary said: "Some of these goals will be very difficult to reach but we believe farmers can do it despite wartime shortages of farm labor, machinery, and production supplies. For wheat, cotton, and tobacco, the goals should not be exceeded. To do so would waste precious labor and supplies.

"For the other commodities, if farmers are able to exceed the goals and processors can handle the products, the Nation's interests would be served. In a word, we must produce to the limit in 1942 the things where shortages may occur under wartime conditions, because if the war is a long one, it will become increasingly more difficult to get production.

"* * * We call on farmers for redoubled effort. We are throwing all the resources of the Government agricultural programs into helping

them do their wartime job. Every program is being realigned to make it serve the single purpose of speeding production. * * * This is an all-out program difficult of attainment, but in the Nation-wide farm canvass recently completed, farmers have already indicated that they plan to equal or exceed the production called for in most of the goals announced in September.

"The Department of Agriculture, through the management of its programs, and through cooperation with the other agencies of Government whose work touches the farmers' problems of labor, supply, and price, will do its utmost to bring farmers all possible aid in getting the job done. Adequate farm production is vital to the Nation's existence, and the task of achieving it will command the energy and devotion of every farm family."

Revised Goals for 1942, Compared With Goals Announced Last September and the Corresponding Acreage, Production or Slaughter for 1941¹

Commodity	Unit	1941	September goal	Revised goal	Percent of 1941
		<i>Thousands of units</i>	<i>Thousands of units</i>	<i>Thousands of units</i>	
Milk.....	Pounds.....	115, 770, 000	125, 000, 000	125, 000, 000	108
Eggs.....	Dozens.....	3, 728, 000	4, 000, 000	4, 200, 000	113
Chickens.....	{Number (slaughter)}	585, 000	644, 000	644, 000	110
(Farm production only, does not include non-farm production or commercial broiler output. The September goal has been restated in line with the revised estimate of numbers for 1941)					
Hogs.....	Number (slaughter)	72, 500	79, 300	83, 000	114
Corn.....	Acres.....	87, 164	87. 5 to 90, 000	92. 5 to 95, 000	108
Cotton.....	Acres.....	23, 250	22 to 24, 000	25, 000	108
(Within this acreage, a shift toward the production of longer staples will be encouraged in the areas where such cotton can be produced)					
Wheat.....	Acres.....	62, 400	50 to 55, 000	55, 000	88
Tobacco:					
Flue-cured.....	Acres.....	732	762	843	115
Burley.....	Acres.....	357	358	383	107
Other domestic.....	Acres.....	261	247	272	104
Rice.....	Acres.....	1, 245	1, 200	1, 320	106
Sugarcane.....	Acres.....	265	(No acreage restrictions in 1942)		
Sugar beets.....	Acres.....	775	(No acreage restrictions in 1942)		
Dry beans.....	Acres.....	2, 304	Same as 1941	2, 600	113
(Goal for dry beans provides for an increased acreage for white, pink and pinto beans, and about the same acreage as in 1941 for other varieties)					
Dry field peas.....	Acres.....	384		665	173
Canning peas.....	Cases.....	28, 700		38, 000	132
Canning tomatoes.....	Cases.....	31, 430		40, 000	127
Farm gardens.....	Number.....	4, 800	About 5, 760	About 5, 760	120
Turpentine.....	Barrels.....	285	400	450	158
Rosin.....	Barrels.....	950	1, 333	1, 500	158
Cover crop seed.....	Acres.....	265	415	415	157
Soybeans.....	Acres.....	5, 855	7, 000	9, 000	154
Flaxseed.....	Acres.....	3, 367	Same as 1941	4, 500	134
Peanuts.....	Acres.....	1, 964	3, 500	5, 000	255
(Goal for peanuts is about 1,600,000 acres for nuts, or same as 1941, and 3,400,000 acres for oil)					

¹ Farm acreage production or slaughter, except for eggs, which includes nonfarm production estimated at 10 percent of farm.

FATS AND OILS

The revised production goals for 1942 place particular emphasis on the production of oil-bearing crops such as peanuts and soybeans so that our supplies of oils and fats may not be reduced too drastically, even though importations from the Far East are affected by the war. The goal for soybeans has been raised to 9 million acres; flaxseed, 4.5 million acres; peanuts, 5 million acres.

To encourage increased production of these oil-bearing crops, price and loan supports are to be employed, including a loan on flaxseed averaging at least \$2.10 per bushel, farm basis, with location and grade differentials; purchases of soybeans at \$1.60 a bushel, farm basis, for designated varieties of U. S. No. 2 Yellow, with location and grade differentials; and Government purchases of peanuts at \$82 a ton for U. S. No. 1 White Spanish Type for oil, delivered at the approved local receiving agency, with location and grade differentials. The purchase price for No. 1 Runners will be \$78 a ton and \$70 a ton for Class A Virginias.

Efforts will be made also to step up the production of lard, tallow and grease in packing plants.

(BAE says that a strong domestic demand for fats and oils and large exports of lard are in prospect for 1942. Production plus imports, however, may be 8 to 10 percent less than total requirements as a result of curtailment of imports from the Pacific. The deficiency can be covered by withdrawals from stocks, but a material increase in production in the United States will be needed this year if requirements are to be fully met in 1943. Prices of fats and oils probably will average higher in 1942 than in 1941, although it is likely that advances from recent levels will be limited by control measures.)

FEED GRAINS The Secretary said "We are increasing the goals for corn by 5 million acres in order to have plenty of grain to continue the expansion in meat, dairy, and poultry production now well under way. In order to expand feed supplies in certain areas and to provide

Expected Acreages or Production Compared With Forecasts of Last September and the Accompanying Data for 1941

Commodity	Unit	1941	September estimate	January estimate	Percent of 1941
		<i>Thousands of units</i>	<i>Thousands of units</i>	<i>Thousands of units</i>	
Cattle and calves	Number ¹	25,905	28,000	28,000	108
(The marketing of cattle and calves equal to the estimated production is recommended in order to stabilize cattle numbers and increase the available supply of meat.)					
Sheep and lambs	Number ¹	22,630	22,900	22,900	101
Wool	Number of sheep shorn	48,900	51,200	51,200	105
Turkeys	Number ¹	32,500		35,750	110
Oats	Acres	39,363	40,000	40,000	102
Barley	Acres	15,080	About 14,375	16,000	106
Rye	Acres	3,500	Same as 1941	3,550	101
Grain sorghum	Acres	9,397	9,375	10,000	106
All hay	Acres	71,893	74,000-75,000	72,000	100
Potatoes	Acres	2,793	About 3,060	About 3,060	110
Sweet potatoes	Acres	843	About 850	About 850	101
Fresh vegetables:					
Commercial truck	Acres	1,680	About 1,785	About 1,840	110
Market gardens	Acres	1,065	About 1,075	About 1,075	101
Canning vegetables			Other than peas and tomatoes, about same as 1941		
Fruit			Total production about same as 1941. Fruit production cannot be easily increased, and emphasis should be on prevention of waste, and on better distribution and utilization as between fresh, dried, and canned.		
Hay crop seed	Acres	3,923		4,919	125
Lumber	Board feet	32,500,000		33,600,000	103
Pulpwood	Cords	14,300		14,300	100

¹ Slaughter.

storage space for the new wheat crop, we also are making arrangements to release Government-owned wheat for feeding at prices comparable with corn."

There will be no marketing quotas on corn this year. Corn producers in the commercial corn area who wish to exceed their acreage allotments by planting up to their usual acreage in order to have more feed may do so without incurring reduction in other payments. This, it is expected, will be especially helpful in the dairy areas.

(Supplies of feed grains, high protein feeds, and hay are the largest in more than 20 years. But there are large numbers of livestock on farms, and the disappearance of feed grains is expected to be heavy during the current marketing year. The carryover of feed grains in 1942 will be smaller than in 1941. Prices of most feeds advanced over 25 percent during 1941; prices will be supported by a strong demand and the higher loan rate on 1941 corn during the current year.

(The Department of Agriculture announced in mid-January a plan for the offering of approximately 100 million bushels of wheat by the Commodity Credit Corporation for feed, to aid producers of livestock, dairy, and poultry products in attaining their production goals. The disposal of substantial quantities of wheat will aid also in making additional storage space available for the 1942 grain crops. The feed wheat sales price per bushel for cracked wheat delivered to the purchaser will be the lower of (1) the 1941 wheat loan value at point of delivery; or (2) the Commodity Credit sales price for corn per bushel at point of delivery. No sales of cracked wheat will be made at a price delivered of less than 90 cents per bushel except wheat produced and stored in those counties where the 1941 wheat loan value is below 90 cents. The Commodity Credit sales price for corn at point of delivery will be the announced sales price for No. 2 yellow corn, basis Chicago, in store, plus cost of freight and handling to point of delivery.

Sales of bulk wheat for feed will be made at a price slightly less than the price for cracked wheat. Producers may order the wheat through their dealers or direct from the regional offices of the Corporation.)

LIVESTOCK PRODUCTS The announcement of revised goals stated that farmers are increasing their hog and chicken numbers to such an extent that it will be possible to turn the additional feed supplies into larger quantities of meat, lard and eggs than was thought possible last autumn when the first 1942 production goals were announced.

The revised goals call for an increase of 4 million head in hogs marketed and 200 million dozen eggs over the September 1942 goals. The increased feed supplies also will help to attain the goals set for meats and for milk marketing and production, it was stated. The price-supporting program announced last Autumn for hogs, eggs, evaporated milk, dry skim milk, cheese, and chickens (excluding broilers) has been extended from Dec. 31, 1942, to June 30, 1943. Under this program prices are supported at a minimum of 85 percent of parity.

(Production of Milk and of most **Manufactured Dairy Products** is expected to be the largest on record in 1942. Even so, prices of dairy products probably will average higher in 1942 than in 1941, as result of increasing consumer incomes and prospective large exports under the Lend-Lease program. * * * Production of **Poultry Products** responded rapidly to favorable prices in 1941, and further material increases are expected this year. Prices received by farmers for poultry products are likely to average higher this year than last, because of the stronger average domestic demand and prospective Lend-Lease purchases.

(**Hog Production** and marketings will set a new high record in 1942. But the effect of these large supplies upon hog prices will be offset by a higher level of consumer demand this

year than last and by increased Government purchases of pork and lard. Cash farm income from hogs in 1942 is expected to be the largest in more than 20 years. * * * The movement of **Stocker and Feeder Cattle** into the Corn Belt during November and December was larger than a year earlier, but the increase did not offset the 20 percent decrease of the preceding 4 months. Fat-cattle prices have advanced sharply since early November.

(More **Lambs** probably will be fed during the 1941-42 feeding season than the record large number fed last year. It appears likely, too, that the 1942 lamb crop will be a little larger than the 1941 crop. Prices of lambs followed a moderate upward trend during 1941; the average price received by farmers for lambs during the year was nearly \$1.50 higher than in 1940.)

DRY BEANS The revised goals call for an increase in dry edible beans and dried peas. The goal for dry beans is 13 percent above 1941 acreage and for dry edible peas 73 percent more than in 1941. Prices will be supported at not less than \$4.75 per hundredweight for U. S. No. 1 Pea beans and Medium White, Great Northern, California Small White, Pink, and Pinto beans, and not less than \$5.25 per hundredweight for U. S. No. 1 dry peas of designated varieties, in bags f. o. b. cars at country shipping points. No. 2 grades will be supported at a slightly lower level.

(The 1941 record bean production probably will be exceeded in 1942, but prices probably will continue the upward trend in evidence through 1941, reflecting further improvement in demand.)

RICE All restrictions on rice acreage have been removed; and the goal has been raised to 1,320,000 acres. An additional 5 million bushels of rice above the goal announced last Autumn is called for. This will pro-

vide for a substantial increase in rice production in 1942. (Production of rice totaled 54 million bushels in 1941, compared with 54.4 million bushels in 1940, and with 45.7 million bushels average for the ten years 1930-39. Acreage harvested in 1941 totaled 1,245,000 acres, compared with 1,069,000 acres in 1940, and with 942,000 acres average during 1930-39.

(Prices of rice are at the highest level since 1925. Prices have advanced since last September, reflecting declining 1941 crop prospects. With a small carry-over in prospect at the beginning of the 1942 season and the likelihood of increased domestic and foreign requirements in 1942-43, an increase in 1942 seedings appears amply justified.)

CANNING CROPS Provision is made for an increase over 1941 of more than 18 million cases in the pack of canned fruits and vegetables. The revised acreage goal for canning vegetable crops is expected to result in a pack 45 percent above the 1936-40 average, and a program has already been announced for obtaining an increase of more than one-fifth over the 1941 pack of canned peas and tomatoes. The indications are that production of vegetables for fresh use in 1942 will show an increase over 1941 production.

The canned fruits pack is expected to be 4 million cases larger than in 1941, provided enough tin is made available. Dried fruit production is expected to be 100 thousand tons larger than in 1941.

(**Truck crop production** in 1941 was smaller than in 1940, but higher prices resulted in a record income to producers. There will be a general tendency to increase truck crop acreage this year, both for the fresh market and for processing. Owing to the increase in demand, it is expected that prices received by producers generally, will average higher than in 1941.

(**Total production of Fruits** in the 1942-43 season—July-June—probably will be about the same as in the 1941-

42 season. Consumer purchasing power will average higher in 1942 than in 1941, and the demand situation for fruits and fruit products will be the most favorable in more than a decade.)

MISCELLANEOUS

The **Potato Goal** provides for increases in planted acreage over 1941 and a price supporting program is to be announced later. * * * Revised goals for all types of **Tobacco** except cigar wrapper are higher than those established in September. * * * It is expected that **Cotton** acreage will be about 1 million acres larger than was anticipated in September. To increase production of long-staple cotton, special premiums will be offered on staples of 1½" and over. * * * There will be no limitation on plantings of **Sugar Beets** and sugarcane in 1941.

(Opportunity for increased plantings of **White Potatoes** in 1942 is seen in the continuing increase in consumer demand for all foods. Prices of potatoes should average

higher than in 1941. * * * Increased plantings and production of **Sweetpotatoes** are in prospect for 1942 as a result of the rising level of food prices. * * * August 1, 1942, carry-over of **Cotton** may total 10 million

Index Numbers of Prices Received and Paid by Farmers

1910-14=100

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1941			
January.....	104	123	85
February.....	103	123	84
March.....	103	124	83
April.....	110	124	89
May.....	112	125	90
June.....	118	128	92
July.....	125	130	97
August.....	131	133	98
September.....	139	136	102
October.....	139	139	100
November.....	135	141	96
December.....	143	143	100
1942			
January.....	149	146	102

¹ Ratio of prices received to prices paid.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Agricultural Marketing Service. Average of reports covering the United States weighted according to relative importance of district and States]

Product	5-year average, August 1909-July 1914	January average 1910-14	January 1941	December 1941	January 1942	Parity price January 1942
Cotton, lb.....	12.4	12.22	9.45	16.23	16.93	18.10
Corn, bu.....	64.2	58.9	56.0	66.9	72.7	93.7
Wheat, bu.....	88.4	88.4	73.0	102.2	108.1	129.1
Hay, ton.....	11.87	11.87	7.78	9.43	10.15	17.33
Potatoes, bu.....	69.7	64.2	54.6	82.7	97.6	103.6
Oats, bu.....	39.9	39.0	33.3	45.2	50.2	58.3
Rice, bu.....	81.3		90.6	143.9	167.6	118.7
Peanuts, lb.....	4.8	4.6	3.28	4.79	5.11	7.01
Tobacco:						
Fire-cured, types 21-24 lb.....	13.6		9.7	14.8	13.7	12.4
Burley, types 31 lb.....	22.2		15.5	29.1	29.3	28.0
Maryland, types 32 lb.....	22.9			25.0	24.0	20.8
Air-cured, dark, types 35-37 lb.....	11.2		7.9	11.4	12.9	10.2
Cigar binder, types 51-55 lb.....	19.9		14.1	21.9	14.5	18.1
Apples, bu.....	.86	1.00	.90	1.09	1.16	1.40
Beef cattle, cwt.....	5.21	5.04	8.39	9.38	9.77	7.61
Hogs, cwt.....	7.22	7.03	7.26	10.21	10.55	10.54
Chickens, lb.....	11.4	10.8	18.7	16.8	17.0	16.6
Eggs, doz.....	21.5	28.0	19.7	34.1	31.3	29.8
Butterfat, lb.....	26.3	29.2	31.1	36.0	36.3	40.5
Wool, lb.....	18.3	18.5	31.3	37.1	37.2	26.7
Veal calves, cwt.....	6.75	6.78	9.70	11.22	12.14	9.86
Lambs, cwt.....	5.87	5.79	8.34	9.86	10.30	8.57

¹ Post-war base.

² Revised.

³ Base pricecrop years, 1934-38.

⁴ Base pricecrop years 1910-28.

⁵ Adjusted for seasonality.

bales, or about 2 million bales less than on that date last year.)

OUT-LOOK BAE says in outlook that prices received by farmers for farm products are expected to hold around parity in 1942, averaging neither greatly above nor greatly below that point. Prices received in relation to prices paid, interest, and taxes, are expected to average about the same as at the end of 1941, when the ratio was at 99 percent of parity. * * * Total **Production** of farm products in 1942 is

expected to be the largest on record, nevertheless prices are likely to rise in response to increased consumer incomes, increased consumer demand for food, and continued Government purchases for Lend-Lease shipment. Farm product prices are expected to average about 25 percent above 1941. * * * Increase in **Prices** and increase in **Production** of farm products are expected to yield farmers at least 2 billion dollars more **Cash Income** in 1942 than in 1941 when total was 11.6 billion dollars. **Costs of Production** also will rise.

Farm Machinery in 1942

ALLOCATIONS of metals by the Office of Production Management (now under the War Production Board) have made possible a 50-percent increase in the manufacture of farm machinery repair parts above the output in 1940. OPM announced that in drafting its allocations program the view was taken after consultation with the Agriculture Department, that adequate repair of existing machinery is the first step in the attainment of the 1942 farm production goals.

As for new farm machinery, the allocations of metals range from zero in the case of portable corn cribs to an increase of 251 percent in the manufacture of wooden stock tanks. Average for all machinery combined is 83 percent of the production in 1940. Allocations provide for increased production of dairy machinery and equipment, electric brooders, garden planters and cultivators, 1-row corn pickers, peanut pickers and other implements needed in the Food-for-Victory production campaign.

ALLOCATIONS for increased production of planting, seeding and fertilizing machinery include 2-row tractor drawn or mounted combination corn and cotton planters; 1- and 2-row, horse or tractor drawn transplanter; hand, horse or tractor drawn

garden planters; 1-row horse or tractor drawn listers with planting attachments, and 2-wheel tractor drawn manure spreaders. Machinery to be produced in the same quantity as in 1940 include 2-row, tractor drawn or mounted corn planters, and hand broadcast seeders. Decreases include other types of corn planters, combination corn and cotton planters, potato planters, grain drills, fertilizing distributors, and lime spreaders.

Reductions are provided for practically all types of plows, harrows, rollers, pulverizers and stalk cutters, cultivators and weeders, and harvesting machinery other than rice binders, 1-row pull and mounted type corn pickers, potato diggers, and pea and bean harvesters. Decreases are provided for practically all haying machinery except windrow pick-up hay press combines. Provision is made for equal or increased production of pea and bean threshers, peanut pickers, food grinders and crushers, and farm size cane mills.

The orders provide for reduced production of all types of tractors except garden tractors. The production of all types of engines will be reduced this year. Provision is made for decreased production of farm wagons, trucks, and trailers. All types of

spraying outfits except hand sprayers will be in smaller supply. Fewer farm elevators will be manufactured, but more deep well jet pumps. In the case of barn and barnyard equipment, provision is made for equal or increased production of overhead feed and litter carriers, feed trucks, hay carriers, hay forks, tank heaters, and wooden stock tanks.

INCREASES in dairy machinery and equipment include milking machines, cream separators, milk coolers, and butter-making equipment. The production of incubators, heated battery brooders, poultry-growing batteries, laying batteries, poultry feeders, and poultry waterers will be reduced. . . . OPM announced that a schedule of permissible production on every type of farm equipment—ranging from windmills to wheelbarrows—has been sent to all machinery manufacturers and to War Boards of the Department of Agriculture. There are about 1,200 manufacturers of farm machinery in the United States.

Farmers have been concerned with the difficulty blacksmiths and rural repair shops had for a time last autumn in getting welding rod, bar iron, and

other metals. In December, OPM set up a special category to make uncoated welding rod, bale ties, nails and wire rope available to warehouses up to 100 percent of the amounts delivered in the same quarter of 1940, and wire, woven fence wire, poultry netting, stucco netting, barbed wire, staples, fence posts and galvanized sheet and strip, up to 70 percent.

Officials point out there are some pieces of farm equipment which are not covered by the Farm Machinery Order, since such equipment is not strictly agricultural, and, indeed, may have military uses. Included in this category are crawler-type tractors, and heavy duty electric motors. To obtain such equipment, farmers must get OPM priority. The whole priority system, as it affects agriculture is designed to enable farmers to get supplies without filling out forms. Priorities in all but the special cases of crawler-type tractors, and heavy-duty electric motors, apply only to manufacturers or warehouses—not farmers.

Department of Agriculture officials have reported that production of farm machinery reached new high levels in the last 2 years; that generally speaking there is a heavy reserve of usable implements on farms.

HEMP, COTTON, FLAX

Several years ago the Bureau of Plant Industry began work in cooperation with a commercial concern to establish plantings of manila hemp in Central America. The planting was enlarged in 1940 and further increases are planned. Manila hemp is used widely for ropes on farms, in industry, and especially in the Navy. It has been imported from the Philippines.

* * *

Sea Island cotton has the longest and strongest fibers of any type, and has been used in the manufacture of balloons and parachute cloths, gas cells for dirigibles, and airplane wing coverings. New strains of Sea Island coming into production in 1942 have

even longer and finer fiber, which makes them more useful in meeting war needs. The SxP variety of American-Egyptian cotton developed by the Bureau of Plant Industry and now in large scale production in the Southwest, is being used for making balloon cloth and inflatable pontoons for seaplanes.

* * *

Fiber flax is now a strategic fiber, Cooperative research in Oregon has yielded improved methods of culture, harvesting and handling flax. Two new varieties—Martin and Highboll—were developed by plant breeders. At present prices these varieties return about \$25 an acre more than those formerly grown.—F. G.

TO WIN THIS WAR

*Do farmers have the plant capacity, the man and machine power, the incentives to turn out the great volume of farm products required in 1942? The answers seem plain as we look at the great expanse of our agriculture * * * at the more than 1 billion acres of land in farms * * * at the millions of people working these farms to produce food, feed, and fibers in abundance for us and our allies * * * at the vast processing and food-distribution machinery in this country.*

No other nation seems to be so well equipped to feed its own people and to take on the job of feeding millions of its allies. Given the physical capacity to produce, the incentive lies in the determination to defeat the forces of aggression. Prices of farm products are the highest in a decade or more. Costs of production also are rising. Cash farm income this year will be a fairer share of the total national income than in many years past.—Ed.

I

PLANT CAPACITY Our agricultural plant, as reflected in acres of cropland and numbers of livestock, is in better position today in most respects than it was in World War I. Many developments in agriculture during the past quarter century have given us a physical agricultural capacity well fitted to meet the unusual demands for more food and farm commodities. The land itself is in unusually good condition following years of intensive conservation practices. Farm buildings and farm equipment are in fairly good state of repair. Purchases of farm machinery in each of the past two years have been among the largest on record.

The annual average acreage of all cropland harvested, including land in farm gardens and in nonbearing fruit and nut trees, has been moderately larger in recent years than in the pre-World War I period 1910-14, but smaller than in a number of intervening years. The largest acreage in any year from 1910 to 1919 was the 365 million acres reported in 1919. This figure was exceeded by the 1928-32 average, and by the acreage in three separate years since 1929—in 1930, 1931, and 1932—although con-

trol programs and drought reduced the acreage harvested in many years of the past decade. Acreage harvested in 1942 will probably be the largest since 1932.

NOT only is the cropland harvested now moderately larger than in pre-World War I, but the needs for certain uses of cropland have decreased. This has released land for other uses. The area of land required to feed workstock has declined from 100 million acres to about 50 million acres—from more than 30 percent of all cropland harvested in 1910 to less than 15 percent of all cropland harvested in 1941. During the war years 1917 and 1918 an average of 96.5 million acres was required to produce feed for workstock. Now about half this acreage is so required; in addition, a considerable acreage of pasture land, formerly used to supply feed for horses and mules, has since been made available for other types of livestock. The acreage required for the production of principal exports in the years immediately preceding the war was about 10 million below the 1910-14 average.

Cropland supplying food, fiber, and tobacco for domestic consumption has increased at about the same rate as the population of the United States.

The per capita acreage figure has remained fairly constant, ranging from 1.8 acres to 2.2 acres in the years from 1910 to 1940.

The expansion in total crop acreage has been accompanied by a moderate increase in yield per acre of most of the principal crops. The increase in yields from 1910-14 to 1937-41 has been fairly large for Irish potatoes, cotton, tobacco, and sugar beets; small increases have been recorded also for corn, wheat, barley, oats, flax, and all tame hay. The good weather of recent years, programs of soil conservation and improvement, and the adoption of improved varieties and production techniques have been of importance in increasing yields. In the case of certain crops, quality as well as yield has been increased. This is especially true of forage crops where soil-improvement programs have resulted in better pastures and a shift to alfalfa and other high-protein hay crops.

Increases in crop production in recent years have been largely in the commodities which are now needed in even greater abundance in fulfillment of the Food-for-Victory campaign. Average production of truck crops in the period 1937-41 was more than three times the production in 1910-14, and the annual production of fruits and nuts was approximately 70 percent larger. The production of grains is moderately higher, while the volume

of cotton produced has been somewhat smaller in recent years.

THE situation as to livestock and livestock products is similar to that as to crops. The annual average number of milk cows, other cattle, and sheep in the period 1937-41 was well above the 1910-14 average. The number of workstock is smaller, and the number of hogs averaged about 3 million head less in 1937-41 than in 1910-14. Numbers of all meat animals have increased greatly since the drought years of the middle 1930's; in 1942 it is expected that marketings of hogs, cattle and calves, and sheep, will be the largest on record. The goal of 83 million hogs for slaughter, for example, is more than 3 percent above the previous high, and preliminary indications are that the goal will be exceeded.

Yields of livestock products per producing unit have tended to increase during the last quarter century. Egg production per layer is up 17 percent over 1910-14, and milk production per cow in the period 1937-41 was higher than that in any previous 5-year period.

The total volume of production of livestock and livestock products for sale and for consumption on farms averaged considerably larger during 1937-41 than in 1910-14, the increases being meat: animals, about 20 per-

Table 1.—1910-14, 1917-18, 1928-32, and 1937-41 Averages for Specified Items

Item	Unit	1910-14	1917-18	1928-32	1937-41
Cropland harvested ¹	Million acres.....	333	357	367	345
Yield per acre:					
Corn, all.....	Bushels.....	26.0	25.0	24.7	29.0
Wheat.....	Bushels.....	14.3	14.0	14.4	14.6
Tame hay.....	Ton.....	1.2	1.3	1.3	1.4
Irish Potatoes.....	Bushels.....	100	101	112	126
Cotton.....	Pounds.....	200	166	174	246
Tobacco.....	Pounds.....	816	830	760	934
Agricultural production ²	(1935-39=100).....	83.3	88.3	99.8	107.6
Number of animals:					
Milk cows.....	Thousands.....	19,558	21,374	23,264	25,246
All cattle.....	Thousands.....	57,589	72,010	61,200	68,028
Sheep.....	Thousands.....	47,286	39,275	50,482	53,877
Hogs.....	Thousands.....	53,086	60,254	58,151	49,894
Eggs per layer.....	Thousands.....	86	86	94	101

¹ Includes acreages of all crops harvested, farm gardens, and all fruits and tree nuts.

² Production for sale and for consumption in the farm home.

cent; poultry products, 39 percent; dairy products, 55 percent.

THESE and other developments as to crops and livestock resulted in a total production of agricultural commodities for sale and for use in the farm home considerably larger in 1937-41 than in 1910-14. A further increase is in prospect this year. Average production in the period 1937-41 was 29 percent above the 1910-14 average, and 22 percent above the war years 1917 and 1918. Total production in 1941 was more than 3 percent above the previous

high mark set in 1940, and the attainment of the goals in 1942 will mean an increase of approximately 5 percent over 1941. In each of the last 5 years, total production was above the 1935-39 average.

A large part of the increase in production of agricultural products has come well within the framework of our conservation aims. The aims for 1942 production can be met without irreparable damage to the farm plant. Should future developments require it, several million more acres could be brought into production.

W. F. FINNER.

II

FARM POWER The United States has entered World War II better equipped in many ways for large-scale efficient agricultural production than at any time during the last 30 years. Total agricultural production for sale and use in the farm home even with fewer workers on farms is about one-third larger than it was during 1910-14 and nearly one-fifth larger than during World War I.

With fewer agricultural workers and greater total agricultural production, increased production per worker has been even more pronounced, and now averages about 50 percent greater than in the 1910-14 period and 30 percent more than during World War I. With farm workers going into the armed services and into industry, and with agricultural production on the increase, production per worker will be increased still more, although this will mean longer work hours on the farm and probably a better distribution of our available agricultural workers.

INCREASED production per worker of agricultural products for sale or use in the farm home has been brought about largely by two well-defined and important tendencies: (1) A tremendous increase in farm

mechanization; (2) a decrease in farm workstock.

(1) In 1940 there were 1,545,000 tractors on farms compared with only 246,000 in 1920. During the same 20 years, farm motor-trucks increased from 139,000 to 1,047,000, and automobiles on farms from 2,146,000 to 4,144,000 (Table 1). Currently, it is estimated there are about 1,800,000 tractors on farms, 1,050,000 motor-trucks, and 4,200,000 automobiles—all constituting the greatest aggregation of mechanical farm power in the Nation's history.

Table 1.—Trends in Farm Employment and Production, Crop Acres, Workstock, and Motor Equipment, on Farms, 1910-40

Item	1910	1920	1930	1940
Employment in agriculture ¹	100	94	93	87
Total production for sale and use in the home ¹	100	108	120	132
Production per worker, for sale and use in the home ¹	100	115	129	152
Acres of crops harvested (millions).....	329	360	370	343
Number of horses and mules on farms, Jan. 1 (millions).....	24	26	19	15
Tractors on farms, Jan. 1 (thousands).....	1	246	920	1,545
Trucks on farms, Jan. 1 (thousands).....		139	900	1,047
Automobiles on farms, Jan. 1 (thousands)...	50	2,146	4,135	4,144

¹ 1910 figures, pre-war years, 1910-14=100; 1920 is average for war years, 1917-20; 1930 is average for 1928-32; 1940 is average for 1939-41.

The American farmer of today has a larger power unit, his implements and machines are larger, and the rate of travel greater than was the case 20 years ago. Equipment has steadily increased the efficiency of labor, as multiple-row implements and many useful gadgets have come with the tractor. The two-row corn picker, improved planters, small combines (the combine itself was not widely used before World War 1), windrow pick-up balers, beet lifters, and many other mechanical aids have found a place in American agriculture. Considerably less labor is now used for producing most of our agricultural crops than was used during World War No. 1.

(2) During the last 20 years there has been a decrease of about 11 million head of horses and mules on farms, and 1.5 million head in cities. This decrease has made possible the release for other uses of more than 40 million acres of land formerly used to produce feed for workstock. In recent years, more land has been seeded to pastures, and total crop acres harvested in 1940 was less by about 17 million than in 1920. Even with this decrease in harvested cropland agricultural production for sale and home use has increased substantially.

Thus, mainly by a switch from horses and mules to the use of tractors, trucks, and automobiles, along with other labor-saving farm machinery, farm labor is no longer needed to produce 40 million acres of crops previously used for the maintenance of workstock used largely for farm power. One effect of this change has been to increase substantially the output per worker of things sold and used in the home, simply because the labor formerly spent in producing feed for work-

stock now is used to produce products for sale or home use. What has really happened is that the farmers now sell a larger proportion of their production, and buy more equipment, gasoline, and oil, instead of using their labor to produce feed for workstock.

THE present farm plant is well equipped for heavy agricultural production. It can continue for some years to produce large supplies if farm machines and labor are not unduly depleted. With restrictions now placed upon the manufacture of farm machinery it is becoming highly desirable for farmers to extend the working life of machines by proper and timely repairs, and fully to coordinate the use of machinery and labor supplies available in the neighborhood. Indications of a farm labor problem are apparent. These will become more serious as the war continues and will have to be met wisely if our high-powered agricultural plant is to produce larger and larger supplies of food.

Production will need to be expanded on our better producing lands. Even in the poorer soil areas some additional production can be got by harder work and by better use of available resources. Since the real pinch will come in producing areas where peak labor loads are heavy, especially where hand operations are important, arrangements must be made to distribute better the labor supply available during the seasons of heavy work loads. Longer hours and more farm work by school children and women may be necessary as production needs increase and regular farm labor sources diminish.

M. R. COOPER
A. P. BRODELL

III

INCEN- All production groups in
TIVE the Nation are harnessing
their resources to maxi-
mize production for a single goal—
victory. Never before has there been

such an opportunity for each of the production groups—the farmer, the laborer, the industrialist—to give, and to gain or lose so much. Each group has a specific job and for the most part its task cannot be performed by another.

The farmer's position today is much different from that prior to and during World War I. Excepting noteworthy efforts by the newly formed Extension Service, agricultural programs in World War I were insignificant and ineffective compared with those in operation today. Government policy in pre-World War I days fostered education and research aimed at more efficient production. Consideration had also been given to cheaper transportation, better credit facilities, and cooperative marketing.

Since 1933 the Federal Government has been actively concerned with maintaining an agricultural industry that will be ready to meet at reasonable prices all the Nation's needs for food and fiber. "Reasonable prices" have meant that farmers in general will have as much opportunity to live and prosper as any other segment of our population. Farmers cooperating in the Food-for-Victory campaign do so with the confidence that whatever may occur, their welfare will be as well protected as that of workers in industry.

WE have much to learn from World War I, and it may be well to review briefly the hectic farm situation of that time. Prices of raw materials including farm products always rise first in any general upswing. During World War I, the farmer, stimulated by comparatively high prices, pushed to the limit the production of every product he could advantageously grow. Wheat was the outstanding example.

The United States since its origin had been an exporter of wheat. Early in the war, the Russian wheat crop was shut off from the Allies by the blockade of the Black Sea and the Baltic. The Argentine and Australian crops failed and India restricted exports because of a short crop. The responsibility of supplying foodstuffs, particularly wheat, was thus left to the United States—then a debtor nation.

The slogan was "Food Will Win the War," but carefully planned programs

to direct resources into the production of those commodities needed most were hardly known. More sugar and wheat were needed, and wheat, the crop which is, perhaps, adapted to a wider range of conditions than any other major crop, was increased from approximately 47 million acres in 1909-13 to 74 million acres in 1919. The price of wheat rose from 97 cents per bushel in 1914 to 216 cents in 1919. By an executive order on June 21, 1918, the price of wheat was set at \$2.26 for No. 1 Northern Spring and its equivalent at Chicago. The war was over by 1919 but the urgent call for wheat had not relaxed and the price of \$2.26 was still in effect when wheat was sown that year.

Other grains and farm products were expanded, though not to the same extent as wheat. Cotton and most tobaccos were stimulated little by the war. Exports of pork and lard to the United Kingdom had averaged 450 million pounds in the 5 pre-war years as compared to more than 1 billion pounds in 1918. Beef exports increased from 150 million pounds in 1914 to 954 million in 1918.

CASH income from farm marketings rose from 5.9 billion dollars in 1910-14 to 14.4 billion in 1919, although the actual volume of production changed comparatively little. On the upswing, prices of raw materials rise sooner and faster than costs. The index of prices farmers receive for products sold averaged 213 in 1919 compared to an index of 192 in the same year for prices paid. Both index numbers stood at 100 in 1910-14. The index of net farm income of typical wheat producers in the Southern Great Plains area and typical Corn Belt farmers averaged about 385 and 265 respectively in 1919, each based on 1910-14 as 100. The index of purchasing power of farm incomes of these producers averaged about 165 for wheat farmers and 145 for Corn Belt farmers in 1919. Farmers were in a fine position, so they thought, to increase production still further.

Few, if any, methods of forward planning were available in those years. The close of the war and the reconstruction days of Europe left the farmers in this country with heavy debt loads, high costs, low prices, and a dwindling market.

The index of prices received by farmers during the years 1938-40 was 95 percent of the 1910-14 base. This index had risen to approximately 139 by the last quarter of 1941, whereas the index of prices farmers pay rose from an average of 122 in 1938-40 to approximately 139 in the last quarter of 1941. Prices again are rising faster than costs. In 1941 the index of net farm incomes of typical wheat producers in the winter wheat area and Corn Belt farmers (after consideration has been given to change in size of farms) were approximately 137 percent and 124 percent, respectively, of the 1910-14 averages. So far—the farm income and price situation has closely paralleled that of 25 years ago.

FARMERS have a very important and definite part in the present war.

The public and the farmer are interested in seeing a planned production so coordinated that there will not be an overabundance of some commodities while shortages of necessary products exist. There is much evidence that agricultural resources will be used more wisely than in 1914-19 and that farmers will not be left "high and dry" as they were after World War I. Essential programs and credit facilities are at the farmers' disposal, and priorities have been already given for certain essential farm materials together with some deferments from active military services of farm laborers.

In sharp contrast with our first World War experience, farmers and the Government are now working together to get the most from our resources with the least confusion and waste and with an eye to the future. A more mechanized, more efficient, larger farm plant is drafting itself for the war effort and, from all indications, will advance according to plan in its Food-for-victory campaign.

W. D. GOODSSELL

The Wealth of the Netherlands Indies

THE Netherlands Indies, in the equatorial region of southeastern Asia, the most important colonial possession of Holland, is one of the world's largest and richest colonial empires. The main source of its wealth lies in the production and export of such tropical products as rubber, sugar, tea, coffee, copra, palm-oil, cinchona, tobacco, minerals such as oil and tin, and many other commodities. Until very recently the Indies concentrated almost exclusively upon the production of raw materials and foodstuffs for export, as well as of certain foodstuffs (chiefly rice) for local consumption; manufacturing was confined chiefly to the preliminary processing of these agricultural products.

The Netherlands Indies consists of numerous islands having a total

area of 735,000 square miles, or approximately one-quarter of the area of continental United States. The islands stretch for a distance approximately 3,200 miles east and west astride the Equator, from the Indian Ocean on the west far into the Pacific on the east. Java is the most important island of the Archipelago. Sumatra, Borneo, Celebes, Dutch New Guinea and Moluccas, and numerous others are known as the Outer Islands. Java is only about the size of the State of New York (7 percent of the area of the Indies) but supports a population of 48 million; the population of all the other islands is estimated at 22 million.

Java is intensively cultivated from sea level to about 4,000 or more feet. Such is not the case in the Outer Islands, even though the east coast of

Sumatra may well serve as a model of large-scale tropical agriculture. For the most part, however, vast areas of Sumatra, Borneo, New Guinea and of other islands, are marshy lowlands covered with swamp forests and infertile uplands. The fertility of Java and sections of Sumatra, Bali, and Celebes is caused by the prevalence of volcanic soils, warm climate, and abundant rainfall.

THE agricultural economy of the Netherlands Indies falls into two sharply distinguished types: Small-scale native farming and large-scale European plantation farming. Practically the entire output of the plantations is intended for export; that of the native farms is for both domestic consumption and export. The area under native agriculture in Java and Madura (figures for native agriculture in the Outer Islands are not available) is around 20 million acres, while that of plantation agriculture is 2.7 million acres in Java and 3.5 million acres in the Outer Islands.

It is the plantation agriculture with an area of over 6 million acres and a capital investment estimated at 900 million dollars that has made the Netherlands Indies famous the world over. It must also be noted, however, that approximately 45 percent of the agricultural exports of the islands are produced by the natives on their holdings, averaging not more than 2.5 acres per farm. The average planted area per plantation is 1,200 acres. The application of science has characterized the growth of the plantation industry from its very inception. Herein lies one of the principal causes underlying the successful development of the agricultural resources of the Indies.

RUBBER is the most important crop in the Indies, being grown in both Java and the Outer Islands, but chiefly in Sumatra on 1,200 plantations and 800,000 small native holdings. Of the reckless, haphazard, "get-rich-quick" schemes by which wild rubber

production was marked in the late nineties and the first decade of the present century in some countries, there was none in the Netherlands Indies. Science, careful planning, good management, and ample financial resources, have raised the industry to its present eminent position. In 1929 the capital invested in the rubber industry was estimated at 253 million dollars, which sum has risen since then. The total area under rubber (plantation and native) is about 3 million acres. The output of rubber in 1939 was 372,000 metric tons, but under the impact of the tremendous demand for rubber since the outbreak of World War II, the output was increased to 537,000 tons in 1940 (3,000 tons short of that of British Malaya), or 38.6 percent of the total world supply. In the same year the rubber from the Netherlands Indies supplied 35 percent of the requirements of the United States.

Sugarcane is one of the oldest and best known crops of the Indies and, until comparatively recently, was the most important export crop. The loss of export markets and low prices in the 1930's adversely affected the industry. Yet in 1940 the 100 sugar plantations operating in the Indies produced 1.9 million short tons, and exported 889,000 short tons. This is only a third of the exports of the late 1920's, but sizable enough to remain an important element in the economy of the Indies.

Tea and coffee—particularly tea—add considerably to the wealth of the Indies. Coffee is the seventh most important export crop and represents about 5 percent of total volume of coffee entering international trade. The islands are the third largest producers and exporters of tea. In the past decade exports ranged from 142 million to 174 million pounds, thereby accounting for almost one-fifth of all the tea offered on world markets.

THE Netherlands Indies for many years has ranked among the leading tobacco producing and exporting

countries of the world. The quality of its plantation tobacco is perhaps the finest in the world. As a producer, the Indies ranks next in importance after the United States, British India, China, and Soviet Russia. As a tobacco exporting country the islands are outstripped only by the United States. The exports of 1940 were 61 million pounds, as against 75 million pounds the previous year and annual 106 million pounds during 1934-38. The Netherlands Indies is capable of doubling or tripling the exports of tobacco, should the economic and political conditions favor such an expansion.

Even more prominent is the position of the Indies as a producer of copra and palm-oil. By virtue of an output of copra estimated at 800,000 tons, the Netherlands Indies may be considered the world's largest producer of this commodity. Great quantities of copra are consumed domestically, but the surplus is large enough to rank the Indies next to the Philippines as an exporter of coconut products. During the 5-year period 1935-39 the exports represented 29 percent of the world export trade of such products. The Netherlands Indies is second only to Africa as a producer of palm-oil. The more than half a billion pounds of oil and 100 million pounds of kernel exported in 1939 made up one-fourth of the world exports of similar products.

THE outstanding fiber produced in the Netherlands Indies is kapok, used, among other things, in the manufacture of life preservers. The output totals 25,000 short tons a year and the exports constitute nearly two-thirds of all kapok entering international trade. Ninety percent of the world production of cinchona, from which quinine is extracted, is produced in the Netherlands Indies. During the past decade production of cinchona bark varied from 17 to 26 million pounds, and exports from 13 to 24 million pounds. The Netherlands Indies is a principal source of a variety of spices—nutmeg,

citronella, gambier, cloves, cinnamon and pepper. Pepper is most important, its share in world export trade amounting to approximately 80 percent.

Petroleum and tin are the two minerals produced in the Netherlands Indies in large quantities. The total output of oil in the Far East, estimated at about 70 million barrels, is less than 4 percent of world production, but the East Indies alone produces about 60 million barrels. The island of Sumatra accounts for about two-thirds of the output, and the remainder comes from Tarakan and Baenjoie fields of eastern Borneo. As a tin producer, the Netherlands Indies is second largest. In 1940 the output amounted to 45,000 tons, or about 19 percent of the world total. The entire output of this strategically vital raw material comes from the islands of Banka, Billitan, and Singkept, which lie off the east coast of Sumatra.

THE Netherlands Indies lives by its foreign trade, particularly its export trade, which in the predepression years (1925-29) averaged 643 millions of dollars. The role of the United States in the foreign trade of the East Indies is especially worth noting. In 1939 the United States became the principal importer of East Indies products, taking in that year one-fifth of its exports and as much as one-third in 1940. Certain agricultural products are imported by the United States almost exclusively from the East Indies: In 1940 about 35 percent of its rubber imports, 96 percent of its cinchona bark, 96 percent of pepper, 88 percent of kapok, 94 percent of tapioca, 80 percent of palm-oil, 90 percent of all United States imports of leaf used for cigar wrappers, 38 percent of its sisal, and 10 percent of tin imports.

These commodities are even more important in the export trade of the Netherlands Indies. In 1940 the Indies shipped to the United States 61 percent of all its rubber exports, 25 of its tobacco, 63 of its tin, 39 of its kapok, 52 of its tapioca, 60 of its palm-

oil, 84 of its sisal, and 32 percent of its cinchona exports.

COLONIAL possessions are often referred to as the "white man's burden." For the Netherlands, however, this burden has not been difficult to carry. In the process it has become one of the world's leading colonial powers—not so much because 8.5 million Dutch rule a colonial empire of 70 million people—but because the Netherlands Indies, largely through development of its economic resources by the Dutch, has become one of the world's richest and best-paying colonial possessions.

Nor was the economic welfare of the natives neglected. One of the cardinal policies of the Dutch Government has been that the native food supply must be as ample as possible. In this they have succeeded. One cannot but contrast the situation with that in Chosen, under the Japanese, where large numbers of farmers are subject to "spring-hunger" year in and year out. But the outstanding achievement of the Dutch is that it prevented the natives from bartering

away their land. Hardly any other colonial power has insisted that this, the natives' only capital, must be preserved for them. Considering the eagerness with which European entrepreneurs and Chinese and Arab money lenders wished to obtain fertile native land, the Dutch achievement in this respect cannot be overestimated. The virtual absence of tenancy in the islands is a unique phenomenon for which the Dutch colonial land legislation is largely responsible.

The Dutch colonial government directly, and the plantations indirectly, have stimulated the cultivation of export crops by natives. Recently the natives have been furnishing 40 to 45 percent of the total value of all export crops of the East Indies. It may be stated, then, that the natives, particularly of the Outer Islands, are not only taking an active part, and profiting, in the economic development of the islands, but may ultimately outstrip the plantations as a source of exports of tropical commodities.

W. LADEJINSKY,
*Office of Foreign Agricultural
Relations.*

Peanuts for Oil in 1942

DOMESTIC requirements of practically all fats and oils have increased as a result of war conditions. At the same time, imports of important supplies of these essentials have been sharply curtailed because of difficulties in shipping. Increases sought in the production of peanut oil as well as in other vegetable oils and fats are designed to provide this country with adequate supplies.

In the present war, the peanut industry finds itself in a strong position to supply large quantities of oil to meet the greatly expanded needs. This was not the case in World War I. Before that war started, only a small quantity of peanut oil was produced in this country. During World War I, how-

ever, the unprecedented demand for vegetable oils to supply glycerin for munitions purposes and to meet the needs for table and cooking fats and oils greatly stimulated the crushing of peanuts into oil. In 1918, peanut oil production totaled nearly 96 million pounds from around 160 thousand tons of peanuts crushed. The next year saw a slight drop in peanut oil production—to approximately 87.6 million pounds from about 150 thousand tons of peanuts crushed.

Peanut oil production continued to decline until in the early 1930's shelled peanuts sold enough higher in relation to the price for peanut oil, so that it was hardly profitable to crush farmers' stock that was suitable for shelling.

Therefore, the bulk of the peanuts crushed for oil consisted of off-grade broken, or inferior quality farmers' stock. Out of an average approximating 444 thousand tons of peanuts harvested annually during the 1928-32 period, only about 7 thousand tons were crushed for oil. A low point was reached in 1933 when, out of 410 thousand tons harvested, only about 1 thousand tons were crushed for oil.

IN 1934, the Department of Agriculture put into effect a program for the peanut industry designed to improve marketing conditions, by facilitating the diversion of surplus peanuts from shelling to oil crushing purposes. This program, in a form modified through several years of experience, is now administered by the Surplus Marketing Administration. Its operation has been an important factor in the expansion of the peanut oil industry in the United States. From the standpoint of peanut growers, the diversion program has meant improved marketing conditions and a substantial increase in total income from the peanut crop.

From 1934 through 1939, an average of 593 thousand tons of peanuts was harvested, and out of this total 82 thousand tons were crushed for oil. In recent years, practically all of the peanuts crushed for oil were assisted in moving into the oil outlet by Federal payments made under the diversion program. So far, the record year for crushing peanuts into oil was in 1940 when, out of a total of 875 thousand tons of peanuts harvested, approximately 284 thousand tons were crushed. In 1941, out of a crop of approximately 779 thousand tons, it is estimated that about 60 thousand tons will have been crushed for oil. While until a few years ago less than 8 percent of the peanut crop was crushed for oil, increased peanut production resulting partly from the diversion program of the Surplus Marketing Administration helped bring this in 1940 up to around 35 percent.

The need for increased production of oil-bearing crops such as peanuts and soybeans is emphasized in the revised farm production goals announced by Secretary Wickard last month. The goal for soybeans has been raised to 9 million acres. This compares with less than 6 million acres harvested last year. The goal for peanuts has been raised to 5 million acres, and this compares with less than 2 million acres last year. Of the 5 million acreage goal for 1942, about 3.4 million acres would be for the production of oil, and 1.6 million acres for nuts. Great dependence was put upon peanuts for their content of vegetable oil during World War I; now, in World War II, the producers are being asked again to increase greatly the acreage of peanuts for oil.—*Ed.*

OPERATION of the diversion program has been accompanied by a material increase in the annual farm value of peanuts. During the 1928-32 period, the harvested crop had an average farm value of \$28,125,000. In the diversion program period from 1934 through 1939, the farm value of peanuts averaged \$39,813,000. Without including 1936, a year when it was not necessary to operate the diversion program, Federal payments for diverting peanuts to oil averaged under \$1,500,000 annually during the period through 1939. In 1940, the farm value of peanuts exceeded \$57,000,000, and diversion payments on the record quantity of peanuts diverted to oil totaled slightly under \$8,000,000.

The main use for peanut oil has been in the manufacture of shortening and other food products. About 90 percent of the oil has been consumed in these forms. Cottonseed, soybean corn, and peanut oils are somewhat similar chemically and are highly interchangeable in use.

PEANUT production is commercially important in a dozen southeastern and southwestern States. Prin-

incipal producing States are Georgia, North Carolina, Alabama, Texas, and Virginia. For the most part both shelling and crushing facilities are readily available. Cottonseed crushing facilities in particular have been converted in recent years to handle the greater volume of peanuts moving into oil under the diversion program. These mills take on the job of crushing peanuts after finishing with cottonseed. Most of the crushing is done with hydraulic presses. Equipment to crush peanuts is similar to that used for crushing cottonseed for oil. The main change that has to be made is in the set of the knives of the cottonseed disk huller. To break the hulls of the peanuts the knives have to be set farther apart than when used for cottonseed.

After the hulls and the meats are broken, the peanuts are conveyed through a shaker screen which separates the meats from the hulls. Aided by fans and a suction pipe or cyclone separator, the hulls are taken out. The broken meats are then run through rollers. This makes possible a more complete expression of oil. The crushed peanuts then go to the cookers—steam-jacketed kettles in which they are cooked under pressure for a half hour or more further to rupture the oil cells. After the cooking process, the crushed peanuts are formed into cakes and are then ready for the hydraulic press. Expression takes place under pressure, which is gradually brought up to 4,000 or 4,500 pounds, and the oil runs down the sides of the press into a drain. Pressing and draining the oil require about a half hour.

The yellow oil is pumped to a storage tank outside the mill to await further processing and refining. It may first be filtered to remove particles of meal, or the particles may be left to settle in the tank. As needed for shipment, the oil is pumped from the storage tank into tank cars. The yield of oil varies with the season and the variety of peanuts. In general, however, it is esti-

mated that a ton of farmers' stock peanuts will produce an average of about 580 pounds of oil and around 875 pounds of peanut meal, which is the residue from crushing and is used for livestock feed. The remainder represents manufacturing loss, and the hulls and foreign matter.

IMPORTS of peanut oil, while at a peak figure of 165.4 million pounds immediately after World War I, have not since then exceeded 67 million pounds a year, and in many years have been less than 10 million pounds. The Netherlands and China have in recent years been the leading sources of imported peanut oil.

While peanuts are supposed to be native of South America, they were carried to Africa by early explorers and missionaries and reintroduced into America in the Colonial days by the slave traders. The largest commercial producer of peanuts is British India. The industry in China has been expanding and, at least until the invasion by Japan, China probably ranked with India in the production of peanuts. Large quantities of peanuts are produced in various parts of Africa. In North America, the United States is the leading producer of peanuts; a few are grown in Mexico. Production in South America is mainly in Argentina.

NATHAN KOENIG,

Surplus Marketing Administration.

RUBBER

About 10 million seeds of the Hevea rubber tree have been planted in a dozen Central and South American republics, and research aimed at control of disease and improving yields is under way by the United States Department of Agriculture in cooperation with these Latin-American countries. Investigations of plants such as the desert shrub guayule that might be grown in the United States as a source of rubber are also in progress.

Income of Typical Dairy Farms, New York

DAIRY farmers in Central New York,¹ one of the oldest established dairy areas in the country have found their income changing materially from year to year, and in spite of increased efficiencies in organization and production, hardly maintained their economic position during the past 32 years as indicated by the purchasing power of net farm income.² From 1910 to 1935 the purchasing power of net farm income of these typical dairy farmers in central New York was below 100 percent of the 1910-14 base in 16 years, and averaged only 94 percent of 1910-14. Since 1935 their purchasing power from farm operations has been above 100 in all years and has averaged 120 percent of 1910-14. This record since 1935 has been accomplished by a combination of factors such as doing more business (milking more cows than formerly), by skillful culling and breeding for herd improvement, by increased efficiencies in feeding, more effective use of labor and equipment, a better market for their products and general increase in prices received for commodities sold.

Farming in this area is fairly specialized. Over 80 percent of the gross income is from the dairy enterprise. Dairy and poultry together usually account for almost 95 percent of the gross income. These farmers purchase between 70 and 80 percent of their concentrate feeds but are almost self-sufficing in roughage requirements. Roughages are frequently purchased but the quantity purchased is usually small. The grain-milk price ratio is therefore an important factor in this area and farmers' response to it is quite evident.

¹ Chenango, Cortland, Delaware, Herkimer, Madison, Montgomery, Oneida, Otsego, and Schoharie Counties.

² Purchasing power of net farm income is ratio expressed as a percentage of the index of net farm income and the index of prices farmers pay for commodities used for family maintenance, both based on 1910-14.

THE typical dairy farmer in this area milked about 14.3 cows during the period 1910 to 1915 and sold his milk for \$1.56 per hundredweight. He paid approximately \$29 per ton for feed grains. The price situation accompanying World War I began to set in and by 1919 milk prices had risen to \$3.40 per hundredweight. The typical dairy herd increased from 14.3 head to 15.6 during this period.

Even though the price of milk was reduced materially from 1920 to 1923 a fairly favorable grain-milk price ratio was in effect. The size of herd was maintained until 1924 when the price of milk hit a new low; the grain-milk price ratio was one of the lowest on record. The size of herd was reduced to 15 head by 1926. The price of milk began to strengthen and a favorable grain-milk price ratio was in effect for some time. The size of herd was increased to 17 head by 1930 but because of unfavorable prices of the early depression years the herd was reduced to 15.2 head by 1935. Since 1935 prices have been comparatively favorable and the size

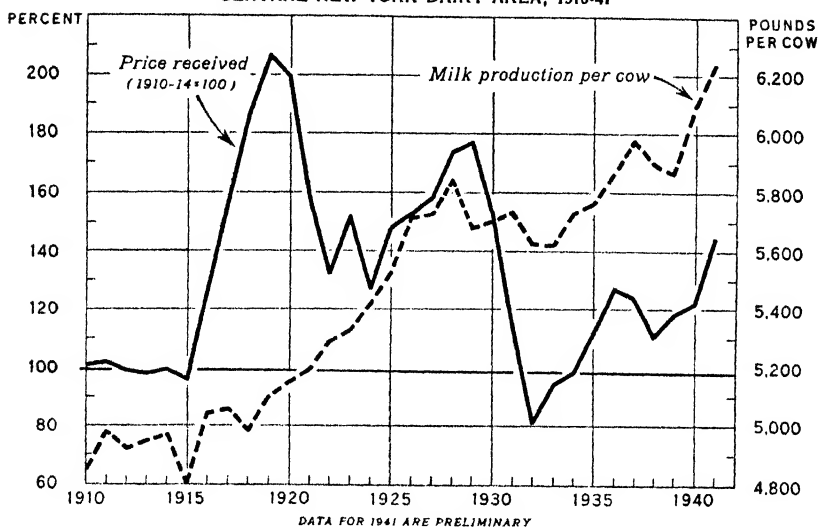
Organization of Typical Dairy Farms New York, 1937-39

	Average 1937-39
Land in farm, acres.....	142.1
Land cultivated, acres.....	54.0
Percentage of farm cultivated.....	38.0
Corn for silage, acres.....	6.4
Oats, acres.....	6.4
Other grains, acres.....	3.2
Hay, acres.....	36.3
Truck, acres.....	1.7
Pasture, acres.....	62.1
Woods, acres.....	20.6
Farmstead, roads and waste, acres.....	5.4
Milk cows, number.....	17.0
Milk produced per cow, pounds.....	5,914.0
Laying hens, number.....	110.0
Horses, number.....	2.5
Hogs produced, hundredweight.....	5.5

Proportion of Gross Income from Various Sources

Item:	Percent of total
Dairy products.....	68.3
Cattle and calves.....	14.5
Poultry.....	1.4
Eggs.....	10.0
Truck.....	4.8
Other.....	1.0
Total.....	100.0

POUNDS OF MILK PRODUCED PER COW, AND INDEX NUMBERS
OF PRICE RECEIVED BY TYPICAL DAIRY FARMERS.
CENTRAL NEW YORK DAIRY AREA, 1910-41



of herd has gradually increased and was slightly over 18 head in 1941.

The typical dairy farmer in this area is now feeding each dairy cow about 25 percent more grain and roughage than he was in 1910-14 but the typical dairy cow has responded with a 25 percent increase in milk production over the amount produced in 1910-14. In 1910-14 the average cow produced about 5,000 pounds of milk. Production per cow was gradually increased to slightly over 5,800 pounds in 1928. In 1928 the grain-milk price ratio broke temporarily and production per cow declined and remained around 5,650 pounds during the depression and until 1935. Since 1935 it has increased and in 1941 reached an all time high of over 6,200 pounds. This increase in production is due, perhaps, to a combination of better feeding, better management, culling and breeding.

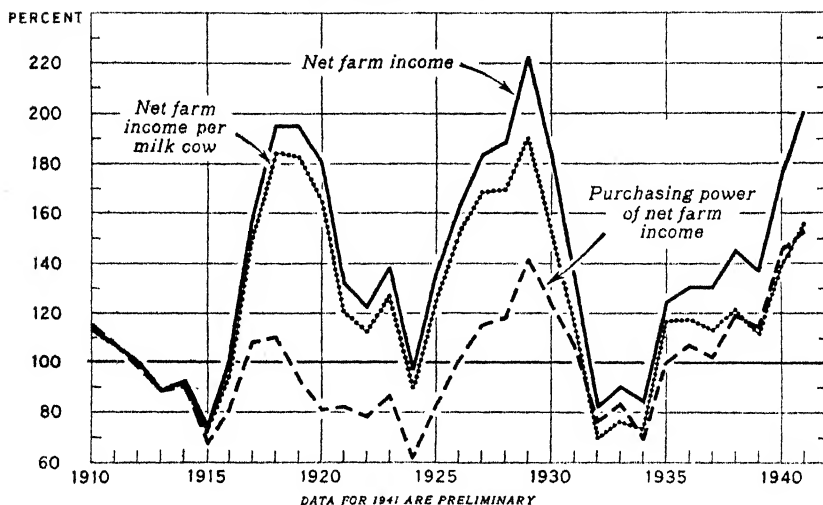
THERE has been a tendency for the typical dairy farmer in this area to acquire additional land though the increase in acreage operated has been small. Available information shows there has been a decrease in the number of farms and an increase in the size

of farm in this area in recent years. Evidently there has been some abandonment of the poorer "hill farms." The typical dairy farmer in the area now has about 18 acres more land than he had in 1910-14 but only 5 acres more land in crops. The increase in crop acres per farm has taken place since 1930. The acreage in grains on the farm has decreased and the acreage in hay and silage has increased during the past 30 years. Corn silage has increased from about 4.5 acres in 1910-14 to almost 7 in 1939-41. During this period the acres in hay have increased from about 32 to 36. The acreage in alfalfa, though still small, has more than doubled in the past 15 years. This has increased both total production and general quality of hay.

These farmers, though they have increased the number of livestock and to some extent the acres of crops, hire very little more labor than formerly. Substantial reductions have been made in the labor requirements per unit of crops and livestock; labor requirements per unit of livestock have not been reduced as much as requirements for crops. The labor requirements per acre of hay have been reduced from approximately 11 hours in 1910-14 to

TOTAL NET FARM INCOME, PURCHASING POWER OF INCOME,
AND INCOME PER MILK COW, TYPICAL DAIRY FARMS,
CENTRAL NEW YORK DAIRY AREA, 1910-41

INDEX NUMBERS (1910-14=100)



DATA FOR 1941 ARE PRELIMINARY

8 hours in 1935-41 and the requirements per acre of small grains have been reduced from 23 to 14 hours during the same period. During this period, the time required to care for a dairy cow was reduced from 145 to 140 hours per year. (Milk production per cow, however, was increased by 21 percent.) This reduction in labor has meant a substantial saving on these farms. The total bill for hired labor on these farms in recent years amounted to about \$225. A large proportion of this reduction in labor, particularly in crops, must be attributed to more appropriate production methods and efficient management; less than one-third of the farmers had tractors.

BETTER management, more appropriate methods of production and changes in prices have been reflected in changes in farm income throughout the years covered by this study. With the increase in demand for dairy products in World War I and the resultant high prices, the index of net farm income based on 1910-14 rose from 100 in 1916 to 195 in 1918 and 1919. The post-war depression set in and prices farmers in this area received

for products sold fell rapidly from an index of 207 in 1919 to 143 in 1921-25. Costs, however, fell less rapidly and in spite of increased production the index of net farm income fell from 195 in 1919 to 97 in 1924. Prices began to strengthen again after 1924 and production continued to increase, with the result that in 1929, farmers received the highest net farm income in the 32-year period. The financial crash came and production tapered off though it remained at a comparatively high level throughout the depression. The index of net farm income in 1932-34 averaged only 85.

During the period 1935-41 the index of prices received by typical dairy farmers in the area averaged 123, the size of dairy herd was increased 19 percent and production per cow 21 percent above 1910-14. A combination of these factors together with savings in labor have resulted in an index of net farm income of 149 during 1935-41. Much of the increase in net farm income in recent years relative to 1910-14 is attributed to an increase in the number of milk cows handled on the typical dairy farm. The size of the poultry enterprise has

been increased, but gross receipts from this enterprise seldom represent more than 10 percent of the gross farm income. Crop acres per farm have increased little.

The physical plants of these typical dairy farmers are now larger than formerly. A rough measure of where the farmers' income position would be if he had not increased his plant can

be obtained by calculating the changes in net farm income per milk cow. This is done by dividing the index of net farm income by the index of number of milk cows per farm both based on 1910-14. From 1935-41 the index of net farm income per milk cow averaged 125 compared to 149 for the index of net farm income.

WYLIE D. GOODSSELL.

Farm Income in 1941

TOTAL cash farm income from marketings and Government payments was 11.6 billion dollars in 1941. This compares with 9.1 billion in 1940, and is the largest total since 1920 when income aggregated 12.6 billion dollars. Of the indicated total for 1941, 11

billion dollars was from farm marketings, and 600 million dollars from Government payments.

Largest increases in income, 1941 compared with 1940, were from oil-bearing crops, particularly cottonseed and soybeans.

Cash Farm Income in the United States, by Commodities, Calendar years 1939-41

Commodity	1939 ¹	1940 ¹	1941 ²
Crops ¹	1,000 dol.	1,000 dol.	1,000 dol.
Wheat	432,004	447,044	710,000
Rye	9,016	9,519	12,000
Rice	31,503	38,434	50,000
Buckwheat	1,553	1,284	1,500
Corn	318,931	369,777	330,000
Oats	45,715	58,590	77,000
Barley	39,720	40,869	52,000
Grain sorghums	6,824	8,274	14,500
Hay	66,001	69,515	90,000
Cotton lint	550,046	573,401	930,000
Cottonseed	76,818	86,434	170,000
Flaxseed	26,426	39,359	52,000
Peanuts	34,748	44,824	70,000
Soybeans	60,871	55,765	112,000
Tobacco	268,597	240,369	275,000
Citrus fruits	128,504	130,870	152,000
Apples	93,843	91,417	120,000
Peaches	40,110	34,701	55,366
Pears	17,972	17,972	29,815
Grapes	39,045	41,301	62,316
Cherries	9,550	11,320	14,819
Apricots	10,548	5,950	9,940
Plums	2,854	3,567	4,532
Prunes	13,056	13,793	13,969
Cranberries	6,932	7,002	8,832
Strawberries	38,999	40,885	42,642
Small fruits ³	12,803	13,275	16,521
Figs	2,541	2,957	4,681
Olives	1,687	3,082	6,591
Avocados	1,255	1,172	1,514
Other fruits	4,330	4,291	5,927
Truck crops ⁴	372,364	397,776	513,591
Dry edible beans	39,098	40,323	62,000
Potatoes	156,339	165,062	158,000
Sweet potatoes	21,110	21,261	25,000
Walnuts (Persian or English)	9,718	10,021	14,808
Almonds	8,971	3,240	3,840
Pecans	4,496	5,560	6,947
Filberts	818	765	1,484
Cowpeas	5,437	5,202	6,000
Legume and grass seeds	37,333	30,428	32,896
Sugar beets	49,436	54,749	58,405
Sugarcane for sugar	16,441	11,333	18,288

Commodity	1939 ¹	1940 ¹	1941 ¹
Crops—Continued.	1,000 dol.	1,000 dol.	1,000 dol.
Sugarcane sirup	6,471	4,143	6,398
Sorgo sirup	3,393	3,865	3,935
Maple sugar	167	141	112
Maple sirup	3,873	3,956	3,333
Miscellaneous crops ⁵	247,800	262,066	287,698
Total crops	3,361,035	3,531,935	4,695,000
Livestock and livestock products:			
Cattle and calves	1,279,074	1,380,170	1,750,000
Hogs	812,003	820,802	1,300,000
Sheep and lambs	179,774	189,402	225,000
Chickens	228,390	215,278	280,000
Turkeys	68,125	76,345	82,000
Eggs (chicken)	423,450	449,233	610,000
Dairy products	1,355,067	1,526,702	1,860,000
Wool	84,324	110,058	143,000
Other ⁶	56,069	53,667	55,000
Total livestock	4,486,276	4,821,657	6,305,000
Total crops and livestock	7,847,311	8,353,592	11,000,000
Government payments ⁷	807,065	765,799	600,000
Grand total	8,654,376	9,119,391	11,600,000

¹ Preliminary. ² Tentative. ³ Includes all berries except cranberries and strawberries. ⁴ Includes dates, kumquats, loquats, nectarines, papayas, persimmons, pineapples, pomegranates, prickly pears, and quinces, as well as apricots, apples, avocados, cherries, figs, grapes, lemons, limes, olives, prunes, plums, and pears in non-commercial States. ⁵ Includes all vegetables grown for sale except dry edible beans, potatoes, and sweet potatoes. ⁶ Includes broomcorn, hops, popcorn, peppermint, and forest, nursery, and greenhouse products. ⁷ Includes ducks, geese, honey, horses, mules, and mohair. ⁸ Includes agricultural conservation, Sugar Act, and price adjustment payments to farmers.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of Industrial workers (1935-39 = 100) ²	Cost of living (1935-39 = 100) ³	Whole- sale prices of all com- modities ⁴	1910-14=100 Prices paid by farmers for commodities used in \$—			Farm wages	Taxes ⁵
					Living	Production	Living and production		
1925.....	90	126	125	151	164	147	157	176	270
1926.....	96	131	126	146	162	146	155	179	271
1927.....	95	128	124	139	159	145	153	179	277
1928.....	99	127	123	141	160	148	155	179	279
1929.....	110	134	122	139	158	147	153	180	281
1930.....	91	110	119	126	148	140	145	167	277
1931.....	75	85	109	107	126	122	124	130	253
1932.....	58	59	98	95	108	107	107	96	219
1933.....	69	61	92	96	109	108	109	85	187
1934.....	75	76	96	109	122	125	123	95	178
1935.....	87	87	98	117	124	126	125	103	180
1936.....	103	100	99	118	122	126	124	111	182
1937.....	113	117	103	126	128	135	130	126	187
1938.....	89	91	101	115	122	124	122	125	186
1939.....	108	105	99	113	120	122	121	123	190
1940.....	123	119	100	115	121	124	123	126	-----
1941.....	156	162	105	127	-----	-----	130	147	-----
1941—January.....	140	138	101	118	-----	-----	123	124	-----
February.....	144	139	101	118	-----	-----	123	-----	-----
March.....	147	141	101	119	124	125	124	-----	-----
April.....	144	142	102	121	-----	-----	124	138	-----
May.....	154	157	103	124	-----	-----	125	-----	-----
June.....	159	167	105	127	129	128	128	-----	-----
July.....	160	173	105	130	-----	-----	130	160	-----
August.....	160	174	106	132	-----	-----	133	-----	-----
September.....	161	177	108	134	136	135	136	-----	-----
October.....	163	178	109	135	-----	-----	139	165	-----
November.....	166	180	110	135	-----	-----	141	-----	-----
December.....	168	184	110	137	-----	-----	143	-----	-----
1942—January.....	-----	-----	-----	139	-----	-----	146	166	-----

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio prices received to prices paid	
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs		All groups
1925.....	157	177	172	153	140	153	163	156	99
1926.....	131	122	138	143	147	152	159	145	94
1927.....	128	128	144	121	140	155	144	139	91
1928.....	130	152	176	159	151	158	153	149	96
1929.....	120	144	141	149	156	157	162	146	95
1930.....	100	102	162	140	133	137	129	126	87
1931.....	63	63	98	117	92	108	100	87	70
1932.....	44	47	82	102	63	83	82	65	61
1933.....	62	64	74	105	60	82	75	70	64
1934.....	93	99	100	103	68	95	89	90	73
1935.....	103	101	91	125	118	108	117	108	86
1936.....	108	100	100	111	121	119	115	114	92
1937.....	126	95	122	123	132	124	111	121	93
1938.....	74	70	73	101	114	109	108	95	78
1939.....	72	73	77	105	110	104	94	93	77
1940.....	85	81	79	114	108	113	96	98	80
1941.....	96	113	92	145	146	131	122	122	94
1941-January.....	84	80	78	124	128	121	100	104	85
February.....	81	80	80	156	130	118	90	103	84
March.....	84	82	83	134	129	118	90	103	83
April.....	90	88	89	161	137	121	104	110	89
May.....	93	98	89	146	138	124	107	112	90
June.....	90	107	97	146	144	126	118	118	92
July.....	98	121	93	130	154	132	127	125	97
August.....	99	128	100	133	158	135	130	131	98
September.....	106	150	89	145	166	140	141	139	102
October.....	101	144	107	164	157	145	146	139	100
November.....	103	136	98	147	151	148	157	135	96
December.....	112	138	98	162	160	148	153	143	100
1942-January.....	119	143	102	204	166	148	147	149	102

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Adjusted for seasonal variation. Revised November 1941.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 88.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

PRICE CONTROL AND INFLATION THE AGRICULTURAL SITUATION

MARCH 1942

A Brief Summary of Economic Conditions

Issued Monthly by the Bureau of Agricultural Economics, United States Department of Agriculture

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FARM PRODUCTION GOALS, the food supply, the prices of farm products, the tight situation as to farm labor and the equipment needed for 1942 production—all these have held the center of agricultural interest this winter. Now the work of preparing the land and of planting the new crops is well under way, spreading rapidly over a widening area South to North across the breadth of America. Early truck crops already are flowing to market the country over, and increasing in seasonal volume. Land once planted to cotton in the South is going into peanuts and soybeans for the increased production of vegetable oils . . . the South hopes to produce this year more food and feed crops and livestock products than ever before. Meanwhile, a new winter wheat crop is well along, promising good yields to add to an already abundant supply of wheat in store. The range country is a picture of unusually large numbers of cattle and sheep in good condition, and the Corn Belt of high record numbers of sows to farrow this spring. Cross country and into the North are the great commercial poultry and dairy regions endeavoring to produce the increased quantities of eggs and milk so needed this year. Everywhere the early season is one of high promise, but to reach the production goals for 1942 hard work lies ahead.

On Price Control and Inflation

(Excerpts from Statement by the President of the United States on signing the Emergency Price Control Act of 1942)

The farm program which has been developed since 1933 has set parity prices and income as a goal. There is nothing in this act (Emergency Price Control Act of 1942) to prevent farmers receiving parity or a fair return. But I feel that most farmers realize that when farm prices go much above parity, danger is ahead. One of the best ways of avoiding excessive price rises, of course, is abundant production. And I hope agricultural prices can be maintained at such level as to give farmers a fair return for increasing production.

In giving my approval to this legislation, I am acting with the understanding, confirmed by congressional leaders, that there is nothing contained therein which can be construed as a limitation upon the existing powers of governmental agencies, such as the Commodity Credit Corporation, to make sales of agricultural commodities in the normal conduct of their operations. In my message to the Congress on August 25, 1941, disapproving the bill H. R. 5300, I pointed out the extreme disadvantages of any action designed to peg prices through the arbitrary withholding of Government-owned stocks from the normal channels of trade and commerce.

I further pointed out that the Commodity Credit Corporation should be free to dispose of commodities acquired under its program in an orderly manner, for otherwise it will be impossible to maintain an ever-normal granary, to protect farmers against surpluses and consumers against scarcity; and that to restrict the authority of this corporation would greatly increase its losses, nullify the effectiveness of existing

programs, and by breaking faith with consumers be inconsistent with our present price control efforts.

I also should like to call attention to the fact that I am requesting the departments of the Government possessing commodities to make such commodities available to other departments in order to aid our war effort. This request, primarily, will affect the cotton stocks of the Commodity Credit Corporation and will permit such stocks to be utilized, directly or by exchange, in the production of war goods. Such transfers will be in addition to the quantities which are now available for sale. The request will also include grain and other commodities which may be needed by the departments concerned.

The enactment of price control legislation does not mean that the battle against inflation has been won. I have doubts as to the wisdom and adequacy of certain sections of the act, and amendments to it may become necessary as we move ahead. Moreover, price control legislation alone cannot successfully combat inflation. To do that, an adequate tax and fiscal program, a broad savings program, a sound production program, and an effective priorities and rationing program, are all needed.

Finally, all bulwarks against inflation must fail, unless all of us—the businessman, the worker, the farmer, and the consumer—are determined to make those bulwarks hold fast. In the last analysis, as Woodrow Wilson said:

"The best form of efficiency is the spontaneous cooperation of a free people."

Statement of Policy

WITH the passage of the Price Control Act, the Office of Price Administration and the Department of Agriculture intend to spare no effort to prevent inflation. These two agencies share this important responsibility and are in complete agreement as to objectives to be achieved. Successful prosecution of the war by ourselves and our allies requires that the disorganizing influences of inflationary price movements be eliminated. Preventing war-time inflation will minimize the danger of another post-war deflation, and so contribute to winning the peace. If inflation is to be controlled, it is now especially important that effective, positive steps be taken to stabilize the cost of living. The Department of Agriculture and the Office of Price Administration intend to pool resources to do all they can to accomplish this end.

FIRST of all we must have abundant production and the Department of Agriculture intends to see that every possible step is taken to assure abundant supplies for all. This has been and will remain the consumer's best assurance of fair prices. Government-owned stocks of grains and cotton will continue to be used to supplement private stocks. Farm legislation and the farm production goals for 1942 have now placed floors under the farm prices of all major products at levels sufficient to protect farmers in carrying out a great increase in production. Steps will be taken to keep feedstuffs at reasonable levels in order that increased production of meats and livestock products will not be hampered by high feed costs. The Office of Price Administration will use its powers to see that prices of the things that farmers buy are held down, so that farm production will not be restricted by unnecessarily high production costs.

A high level of production will not in all cases be sufficient. Where prices get out of line the Office of Price Administration with the advice and as-

sistance of the Department will establish maximum prices. In such cases it will see that this protection is afforded all the way through the channels of distribution to the ultimate consumers. In those cases where there is not enough to go around, steps will also be taken to assure that there is fair distribution to all.

THE American people should realize that it will be the objective of their government to stabilize the cost of living. They, too, can do their part. There is no occasion for hoarding of food. Total supplies of most staple foods are at record or near-record levels. Families who hoarded in the past were simply misguided. Now they are both misguided and unpatriotic, for such buying upsets markets and encourages inflationary price advances.

It should be a point of pride with every good American not to hoard or to waste food. Consumers should buy more of commodities which are plentiful in supply. Thus, they can assist farmers and stimulate the output of larger supplies by directing their purchases to commodities that are relatively abundant. From time to time the Department of Agriculture and the Office of Price Administration will draw the attention of consumers to commodities which are in relative abundance, and to desirable shifts in food habits.

We should like to repeat that the government intends to mobilize its full resources for all-out agricultural production at prices fair to farmers and consumers. Our aim is to stabilize living costs and prevent war-time inflation or post-war deflation. We invite the assistance of farmers and consumers in seeing that the job is done

CLAUDE R. WICKARD,
Secretary of Agriculture.

LEON HENDERSON, *Administrator,*
Office of Price Administration.

Commodity Reviews

PRODUCTION: Abundance

The number 1 job of farmers is to produce the biggest possible quantities of food this year. Goals have been set up as production guides, with emphasis upon the protective foods needed in greatest abundance by our armed forces on many fronts, our civilian forces on the home front, and for export to our Allies. While factories work night and day turning out munitions of war, farmers will be working night and day this spring readying the land for the biggest production of food in our Nation's history.

The food production job in World War I was simple by comparison with present needs. Then we had a population of 100 million, and the principal commodity for overseas shipment was wheat. Now we have a population of 132 million, and the principal commodities for overseas shipment are cheese, evaporated milk, eggs, meats, and lard. Then we had little difficulty in importing fats, oils, and sugar. Now large quantities of these imports have been cut off.

The job of producing food is vastly greater now than in World War I. And there are fewer people to do it. Whereas the farm population during World War I was more than 32 million, it is now less than 30 million. It is true that production techniques have been greatly improved during the last quarter century, and that production per farmer has been increased; but the increases sought this year in food production are greater than these.

Food production goals call for an over-all increase of about 5 percent this year over last; but in individual commodities the goals call for increases as high as 155 percent over 1941—as in peanuts. Besides the production of peanuts for oil, the goals call for an increase of 54 percent in acreage of soybeans, and an increase of 34 percent in the acreage of flaxseed.

Goals call for a total increase of 8

percent in the production of milk this year, 13 percent in the output of eggs, 14 percent in hog slaughter, 8 percent in slaughter of beef cattle and calves, 1 percent in sheep and lambs. The goals call for an increase of 32 percent in the production of canning peas, and of 27 percent in canning tomatoes. Increases of 13 percent in acreage of dry beans and of 73 percent in dry field peas are sought.

A 10-percent increase in total acreage of potatoes is suggested for 1942, and an increase of 22 percent in the production of dried fruits. Goals call for an increase of 10 percent in acreage of commercial truck crops, and an increase of 20 percent in the number of farm gardens—practically a “garden on every farm”—nearly 6 million farm gardens the country over.

PRODUCTION: For War

The Department of Commerce estimates that production for military purposes will constitute approximately 53 percent of the aggregate United States industrial output in 1942, compared with 21 percent last year. In durable goods about 80 percent of the total output will go for war purposes, compared with 35 percent last year. Nearly one-third of the rise in industrial output will occur in the aircraft industry where production will be increased by 300 percent. The machinery industry—which includes most ordnance as well as many aircraft engines—will contribute another third of the gain, and shipbuilding, a sixth.

PRICES: Parity

Farmers have been getting slightly lower prices for commodities than at the beginning of this year, but the National average of prices of farm products continues practically at parity, livestock commodities in general selling above parity, and the crops

selling below parity. A continued high level of consumer demand for farm products and a rising trend throughout 1942 have been forecast by BAE.

National averages of prices received by farmers as a percentage of parity as of February 15 were: Cotton, 98 per cent; corn, 81; wheat, 81; hay, 62; potatoes, 100; oats, 89; rice, 135; peanuts, 77; apples, 85; beef cattle, 130; hogs, 110; chickens, 104; eggs, 99; butterfat, 92; wool, 138; veal calves, 121; lambs, 121.

Enactment of the Emergency Price Control Act of 1942 and the announcement of price support levels by the Secretary of Agriculture have helped to clear the way for farmers in reaching this year's farm-production goals. Now they have practical assurance of the prices they will receive for this year's crop and livestock products.

Besides a growing domestic civilian demand for farm products, the Federal Government is committed to purchases of increasingly large quantities of foods for our armed forces and for export to

our Allies. There is need also for the building of large reserves against future contingencies.

Index Numbers of Prices Received and Paid by Farmers

1910-14=100

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1940			
November.....	99	122	81
December.....	101	123	82
1941			
January.....	104	123	85
February.....	103	123	84
March.....	103	124	83
April.....	110	124	89
May.....	112	125	90
June.....	118	128	92
July.....	125	130	² 96
August.....	131	133	98
September.....	139	136	102
October.....	139	139	100
November.....	135	141	96
December.....	143	² 142	² 101
1942			
January.....	149	146	102
February.....	145	147	99

¹ Ratio of prices received to prices paid.

² Revised.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and States.]

Product	5-year average August 1900-July 1914	February average, 1910-14	February 1941	January 1942	February 1942	Parity price, February 1942
Cotton, lb.....	cents. 12.4	12.3	9.44	16.93	17.80	18.23
Corn, bu.....	64.2	60.1	56.0	72.7	76.6	94.4
Wheat, bu.....	88.4	89.2	67.8	106.1	104.9	129.9
Hay, ton.....	dollars. 11.87	12.02	7.88	10.15	10.76	17.45
Potatoes, bu.....	cents. 69.7	66.3	¹ 54.7	97.6	104.5	² 104.7
Oats, bu.....	39.9	39.8	32.9	50.2	52.0	58.7
Rice, bu.....	81.3		¹ 97.9	157.6	161.8	119.5
Peanuts, lb.....	4.8	4.9	3.39	5.11	5.44	7.06
Tobacco:						
Fire-cured types, 21-24 lb.....	do. ¹ 13.6		9.1	13.7	13.3	12.5
Burley types, 31 lb.....	do. ¹ 22.2		11.8	29.3	24.4	26.2
Maryland types, 32 lb.....	do. ¹ 22.9			24.0	30.0	21.1
Air-cured, dark types, 35-37 lb.....	do. ¹ 11.2		6.9	12.9	11.1	10.3
Cigar leaf types, 41-45 lb.....	do. ¹ 14.1		9.0	11.4	10.2	13.0
Cigar binder types, 51-55 lb.....	do. ¹ 19.9		14.2	14.5	14.8	18.3
Apples, bu.....	dollars. .96	1.06	.93	1.16	1.20	1.41
Beef cattle, cwt.....	5.21	5.11	8.34	9.77	9.93	7.66
Hogs, cwt.....	7.22	7.12	7.19	10.55	11.64	10.61
Chickens, lb.....	cents. 11.4	11.1	14.0	17.0	17.4	16.8
Eggs, doz.....	21.5	23.7	16.8	31.3	27.5	¹ 27.8
Butterfat, lb.....	26.3	27.4	30.5	36.3	36.2	¹ 39.5
Wool, lb.....	18.3	18.5	32.1	37.2	37.1	26.9
Veal calves, cwt.....	dollars. 6.75	6.77	10.11	12.14	12.05	9.92
Lambs, cwt.....	5.87	5.95	8.60	10.30	10.48	8.63

¹ Revised. ² Post-war base.

³ Base price crop years 1919-29.

⁴ Base price crop years 1934-38.

⁵ Adjusted for seasonality.

FARM LABOR: Supply

Farm work is mounting rapidly as farmers go into a new production season. Early season work had a good start, and the number of hired workers on farms was a little larger this February 1 than last. AMS commented: "All in all, absence of the usual surplus of farm labor has not hampered the attainment of current production goals in the Food-for-Victory program so far in 1942," but added that "the 1942 crop work season had not commenced, except in the extreme southern portions of the United States."

Considerable activity by Federal and State agencies deals with the farm-labor situation in efforts to prevent shortages which would jeopardize the attainment of a high record volume of farm production this year. Proposals include a better geographic distribution of the reduced farm labor supply, more effective use of persons normally employed in agriculture, the bringing into the farm labor forces of persons not normally employed, and improvements in housing, working, and health conditions for workers.

(The Department of Agriculture, broadening its information on the farm-labor situation, hopes to make available this spring current estimates of farm employment, by States.)

INCOME: Increase

Figures to be released next month will probably show the best first quarter farm income in many years. Prices of farm products averaged more than a third higher than during the first quarter of 1941, and the volume of marketings of a number of livestock products was larger. Income from marketings and Government payments may total nearly 3 billion dollars, as compared with less than 2.2 billions during the first quarter of 1941. Much of the increase was from dairy products, poultry products, and meat animals. Government payments were

larger, since payments on the 1941 program have been later than on the 1940 program.

Latest estimate of 1941 cash farm income is 11.8 billion dollars, compared with 9.1 billion in 1940. Most farmers shared in the increase, but some more than others, as indicated by the accompanying table of income by principal groups of commodities. Current and prospective economic conditions suggest that 1942 income will be close to 14 billions. Largest on record was 14.6 billions in 1919. There are fewer farms and fewer farmers now than in 1919; income per farm and per capita of the farm population will probably set a new high record this year.

Cash Farm Income 1940 and 1941

Source of income	Jan.- Dec. 1940	Jan.- Dec. 1941
	<i>Million dollars</i>	<i>Million dollars</i>
Income from farm marketings.....	8,331	11,185
All crops	3,509	4,794
Grains	1,007	1,334
Cotton and cottonseed	646	1,107
Fruits and tree nuts	445	607
Vegetables	630	752
Tobacco	241	325
All livestock	4,822	6,391
Meat animals	2,390	3,335
Dairy products	1,527	1,800
Poultry and eggs	754	1,012
Government payments	766	586
Total income including Govern- ment payments	9,097	11,771

MILK PRODUCTION: Goal

Milk production is running below the 8-percent increase which is sought in the 1942 production goals. Production per cow has been slightly heavier this winter than last, and there are about 3 percent more cows on farms. Total output of milk as of February 1 was about 4 percent heavier than on that date last year. A considerable stepping up of production will be required if the production goal of 125 billion pounds in 1942 is to be reached. Production in 1941 totaled 115.8 billion pounds.

The following table shows the 1941 production and the 1942 goals for the principal dairy producing States:

State	1941 production	1942 goal	1942 over 1941
	<i>Million pounds</i>	<i>Million pounds</i>	<i>Percent</i>
Wisconsin.....	13,625	15,400	13
Minnesota.....	8,824	9,690	9
New York.....	7,990	8,390	5
Iowa.....	6,920	7,280	5
Illinois.....	5,509	5,800	5
Michigan.....	5,124	5,540	8
California.....	5,001	5,650	11
Pennsylvania.....	4,918	5,140	5
Ohio.....	4,838	5,270	9
Texas.....	4,495	4,760	6

Suggested increases in other States range from 3 percent in Massachusetts, Delaware, and Rhode Island to 15 percent in Mississippi and Tennessee. Largest percentage increases are in Wisconsin, the far West, and the South. Manufacturing plants for the dairy products most needed in 1942 are highly concentrated in Wisconsin and the far West. In addition, defense industries on the West coast call for additional fluid milk.

The large percentage increases suggested in the South are in line with the desirable long-term changes needed both from the farm management and nutritional points of view, and are immediately needed in areas where the concentration of military camps has greatly increased the demand for fluid milk. Production per cow could be increased rather easily in parts of the South provided sufficient feed is available.

EGGS: Increase

Poultrymen have made a good start toward reaching the 1942 egg-production goal, turning out in January about 17 percent more eggs than in the same month last year. But there is a long way still to go, and a large increase must be maintained during the remainder of the year in order to turn out a total farm production of 3.8 billion dozen eggs for all of 1942. Production in 1941 totaled 3.4 billion dozen eggs. (Besides farm production there is non-farm production equivalent to about

10 percent of the farm output.)

The suggested increase of more than 400 million dozen in farm production of eggs this year is larger than any on record, but it is within the range of probable output. There were about 12 percent more layers on farms this January 1 than last, and the margin over a year earlier may increase further this spring. The relatively large proportion of pullets in laying flocks this year also should help to maintain a continued high rate of lay per bird.

The following table shows the 1941 production and the 1942 goals for the principal egg-producing States:

State	1941 production	1942 goal	1942 over 1941
	<i>1,000 dozen</i>	<i>1,000 dozen</i>	<i>Percent</i>
Iowa.....	230,750	255,167	11
Ohio.....	199,833	218,417	9
Texas.....	184,833	226,333	22
Pennsylvania.....	178,417	194,333	9
Illinois.....	169,250	186,917	10
Minnesota.....	168,250	190,000	16
Missouri.....	167,917	191,333	14
Wisconsin.....	161,833	179,583	11
New York.....	158,677	173,583	9
California.....	141,017	155,417	10
Kansas.....	133,250	154,583	16
Indiana.....	131,583	147,667	12
Michigan.....	112,667	121,167	8
Nebraska.....	104,417	120,083	15

SOYBEANS: Increase

An increase of 54 percent in the acreage of soybeans for beans is sought this year in order to reach a total goal of 9 million planted acres. Soybeans are produced in 29 States, but the bulk of the output is in the North Central States—principally in Illinois, Iowa, Indiana, and Ohio. The total goal of 6.8 million acres for these 4 States compares with 4.8 million acres harvested in 1941.

These States are accustomed to harvesting large acreages of soybeans for beans, and are fairly well equipped with the power and the machinery needed in growing and harvesting an expanded acreage. Other States where large increases are sought this year include Missouri, North Carolina, Arkansas, Louisiana, and Mississippi.

The following table shows the 1941 acreage and the 1942 goals for the principal producing States:

State	1941 acreage	1942 goal	1942 over 1941
	<i>Million acres</i>	<i>Million acres</i>	<i>Percent</i>
Illinois.....	2,285	2,900	27
Iowa.....	949	1,750	84
Indiana.....	856	1,200	40
Ohio.....	674	900	34

PEANUTS: Increase

Unprecedented increases in production of peanuts are sought this year to help make possible adequate supplies of vegetable oils. The bulk of the increase is suggested in the old peanut-growing States—Georgia, Texas, Alabama, North Carolina, and Virginia. Large production goals have been set up also in Arkansas, Oklahoma, Mississippi, and Florida. Less than 2 million acres were harvested for nuts and oil in 14 Southern States last year; this year the production goals call for 5 million acres. Of the total, nearly 3.4 million acres are intended for the production of peanuts for oil. Nearly half the total acreage will be planted in Georgia and Virginia.

WOOL: Increase

A new domestic wool marketing season is about to open, with prices the highest in 14 years. The clip may be a little larger than 1941, but even so, the production of new wool may be less than half our prospective consumption this year.

Because of the large military requirements for wool, mill consumption in 1942 will again be large. In 1941 it totaled 977 million pounds (greasy shorn and pulled basis), compared with 641 million in 1940, and with 575 million average during the 5 years 1935-39. Consumption in 1941 was the largest in 24 years of record.

Stocks of apparel wool held by dealers and manufacturers, including wool afloat, totaled 356 million pounds on

December 31; in addition, there were about 21 million pounds of domestic wool of the 1941 clip still on farms and ranches and in local warehouses in Western Sheep States. The December stocks were 114 million pounds larger than a year earlier.

At current prices, the 1942 domestic clip probably will yield producers more than 150 million dollars. This compares with 143 million in 1941, and with 110 million dollars in 1940. Prices to farmers in February averaged 38 percent above parity. Little further advance from present levels is in prospect under the maximum prices now in effect.

FLAXSEED: Increase

Farmers in 14 States are being asked to increase the acreage of flaxseed this year to provide needed supplies of industrial oils. Largest increases are sought in North Dakota, Minnesota, South Dakota, and Montana. Farmers in these States planted 2.6 million acres to flaxseed last year; this year they are being asked to put in nearly 3.7 million acres, of which 2.9 million acres will be in Minnesota and North Dakota. Practically no increase is expected in the Corn Belt, because of the need for land in other uses.

Land is available for the desired increases in Minnesota, the Dakotas, and Montana; the main difficulty will be in getting seed. About 750 thousand bushels more seed will be required in these States than was planted last year; handlers are being urged to take steps immediately to get the seed cleaned and made available to farmers for planting.

TOBACCO: Good Season

Tobacco growers have had the best season in years. The crop was the smallest since 1936, but prices for some classes were about double the 1940 average. Calendar year cash income from marketings is estimated at 325 million dollars.

This is the largest total since 1919, when income was 500 million dollars. Smallest in the last 10 years was 115 million dollars in 1932. Consumer expenditures for tobacco were probably around 2 billion dollars in 1941.

Estimated consumption of tobacco in 1941 was in boxcar numbers: 206 billion cigarettes—a new high record; 6 billion cigars—largest total since 1930; and bigger quantities of chewing tobacco and snuff than in 1940. Only the consumption of smoking or “pipe” tobacco decreased. The increased consumption of tobacco was attributed to increased consumer income. Manufacturers tried in midwinter to raise the price of cigarettes, but the Government Office of Price Administration would not permit an advance at that time.

The total domestic supply of tobacco for the 1942-43 season may be slightly larger than it was a year earlier, and considerably above the average for other recent years. Government acreage allotments and goals on flue-cured and Maryland tobacco have been increased 10 percent above the 1941 acreage, but on other tobaccos unchanged. Domestic demand for tobacco is expected to continue high during 1942. Exports will depend largely on available shipping space.

COTTON: Record

Cotton stocks decline as mill consumption mounts to new high levels, and the carry-over next August 1 may be less than 10 million bales. This compares with 12 million bales on the same date last year. Possibility is that stocks will be reduced further next year, unless the 1942 drop should exceed 12 million bales. Especially needed in 1942 production is an increased output of long staple cotton to satisfy the heavy demand for particular qualities in the manufacture of military goods. It is expected that at least 25 million acres will be planted to cotton of all kinds this year, as compared with 23.3 million acres in 1941.

FEED GRAINS: Ratios

Objective of the Department of Agriculture is to maintain price ratios between feed and livestock products on a basis that will make possible the increased production of meats, milk, and eggs which is sought in the production goals for 1942. And to make increased supplies of feed available for poultry producers and dairymen in the Pacific Northwest and in the North Atlantic States, the Commodity Credit Corporation is offering wheat for feed at prices comparable to feed-grain prices.

The national corn acreage goal of 92.5 to 95 million acres compares with 87 million acres planted in 1941. The acreage allotment for the commercial corn area is 10 percent higher than in 1941. The acreage goals for Ohio, Indiana, and Illinois are only moderately above the acreage planted in 1941, but in important wheat States such as Kansas and Nebraska, the 1942 goals of noncommercial corn acreage are suggested at levels considerably above the 1941 planted acreage.

Slight increases are suggested in noncommercial areas of Michigan, Minnesota, and Wisconsin because of the need for feed in increased livestock and dairy production. For most States outside the North Central group the 1942 suggested corn acreage is about the same as in 1941 except that in the Far Western States an increase of about 14 percent above the 1941 acreage is suggested—principally in Colorado.

The suggested acreage for the non-commercial area of all Northeastern States is about 8 percent above the 1941 acreage, but in the South Atlantic and South Central States only small increases are suggested because of the big increases being sought in the acreages of other crops.

It is expected that the acreage goals for corn and soybeans and the probable acreage of other crops in the Corn Belt will result in fuller utilization of land resources than has been necessary in recent years. Some cropland may

have to be drawn from former idle and fallow land and from poorer stands of rotation pasture. The materially reduced seeding of winter wheat in this region in the fall of 1941 has released some cropland for other uses.

HOGS: Outlook

BAE says that the 1942 outlook for hogs has not changed greatly during recent weeks. Inspected hog slaughter in the first 3 months (October-December) of the 1941-42 marketing year totaled about 10 percent less than a year earlier. The winter peak in marketings was not reached until January this year, however, and slaughter in the 4 months, October-January, was little different from that of a year earlier. Slaughter supplies in March were expected to be only a little larger than at the same time last year.

The 1941 fall pig crop of 35.6 million head was the largest on record, and this means materially larger supplies of hogs during late spring and summer. The 1942 spring crop also will be a high record if it totals the 62 million head indicated by preliminary reports. This would mean exceptionally large slaughter supplies of hogs next fall and winter. Ordinarily so large an increase in production would result in lower prices, but not so this year.

Consumer buying power continues to increase, and the demand for hog products will be unusually strong in 1942-43. Moreover, large quantities of pork and lard are required for export to our allies. It is expected that these two factors will more than offset the effects of the increase in marketings upon hog prices. Cash farm income from hogs in 1942 will probably be the largest in more than 20 years.

CATTLE: Slaughter Up

Government livestock specialists look for a material increase in cattle marketings for slaughter in 1942.

Cattle numbers are still considerably below the pre-drought level in most of the Great Plains area, but the number of cattle in many States east of the Missouri River is the largest on record. Total for the entire country is slightly above the previous peak reached in 1934. Even though the number of cattle on farms and ranches should increase further this year, total marketings for slaughter could be substantially larger than in 1941.

Consumers have more money to spend for food than in many years past. This will be a strong price-supporting factor, and cattle prices may advance somewhat despite a large increase in marketings. The best advance will probably be on the upper grades of slaughter cattle, since the supply of such cattle will be smaller this year than last. But the medium and lower grades, besides being in good general demand, will receive considerable support in the heavy buying of beef for the Army.

LAMBS: Increase

Marketings of fed lambs are declining seasonally, but the volume is about 5 percent larger than at this time last year. Offset, marketwise, is the unprecedented high level of consumer demand for meats of all kind. Early lambing had been completed in Arizona and California by mid-February, and the new crop lambs were reported as developing well. Early lambing was well under way in Oregon, Washington, and Idaho.

Sheep wintered well in the Western States, and it is expected that the 1942 lamb crop will be at least as large as the 1941 crop. Much, of course, depends on the weather. Last year the number of lambs saved per 100 ewes was unusually large. Some talk has been going the rounds that lambs may be withheld from market in order to increase the production of wool, but no official information as to this was available at press time.

WHEAT: Big Supply

The supply of wheat totaled about 988 million bushels on January 1. This was 269 million bushels more than on that date last year, and 381 million more than at the beginning of 1940. It is estimated that the carry-over on July 1 next will be about 630 million bushels, as compared with 385 million on July 1 last. In all likelihood the United States will continue to have a 2 years' supply of wheat during 1942-43. The 1942 winter wheat crop was in promising condition in mid-February. A referendum on wheat marketing quotas in 1942 will be held on May 2. Offers by the Commodity Credit Corporation to sell wheat to feeders are intended both to increase the output of livestock products and to make way in storage space for the 1942 crop.

RICE: Increase

The United States needs more rice, and has asked producers in Arkansas, Louisiana, Texas, California, and Missouri to plant at least 1.3 million acres this year. This would be a 10-percent increase over 1941. The Federal Government will make no deductions in conservation payments for exceeding rice acreage allotments; instead, full payments will be conditioned upon the planting of a full allotment, in order to encourage increased production.

The domestic supply of rice for the 1941-42 marketing year has been estimated at 16.7 million barrels. This compares with 17.7 million in 1940-41. By reason of increased domestic disappearance and exports, the carry-over at the beginning of the 1942 marketing year may be considerably smaller than the 1.6 million barrels carry-over in 1941.

DRY BEANS: Increase

Production goals call for large increases in acreages of pink and pinto beans this year, but little change in other varieties. Biggest increases are suggested in Colorado, California, and

Idaho, where land suitable for bean production is available. The increase probably will be made primarily in the dry-land areas because of the competition of sugar beets for irrigated land. Large increases in acreage and production of dry-field peas also are in prospect this year. Prices of dry edible beans are at a high level, even though production in 1941 was the largest on record. An unusually good consumer demand for both beans and peas is being supplemented by heavy Government purchases.

TRUCK CROPS: Acreage

The situation as to winter truck crops has been featured by marked increases in acreages of cabbage and tomatoes, and decreases in snap beans and green peppers. Total for all crops is about the same as in 1941. For all of 1942 an estimated total of nearly 2.9 million acres of commercial truck crops for fresh consumption is expected, or about 6 percent more than in 1941. In addition, the acreage of vegetables for canning (11 crops) is expected to total 2.1 million compared with 1.7 million in 1941. With average yields the canning pack may total 156.8 million cases, compared with 142.1 million cases last year. Big increases are sought in the 1942 pack of canned peas and canned tomatoes.

FRUITS: Little Change

The total bearing acreage of fruits in 1942 will be about the same as in 1941. A slightly larger output of citrus fruits will tend to offset a smaller supply of deciduous fruits, the latter because 1942 is an "off year" for apples and peaches. It is possible, however, that large quantities of fruits will be diverted from the fresh market to canned and dried packs. This applies to citrus fruits, apples, apricots, peaches, pears, and cherries. The production of raisins in California may be increased materially over that in 1941 through diversion of additional quantities of grapes. Producers, pro-

cessors, and distributors are being urged to reduce the waste in marketing,

processing, and handling to a minimum this year.—FRANK GEORGE.

Emergency Price Control Act of 1942

THE Emergency Price Control Act of 1942 was signed by the President on January 30. It provides in subsection (a) of section 3 that "no maximum price shall be established or maintained for any agricultural commodity below the highest of any of the following prices, as determined and published by the Secretary of Agriculture:

(1) 110 per centum of the parity price for such commodity, adjusted by the Secretary of Agriculture for grade, location, and seasonal differentials, or in case a comparable price has been determined for such commodity under subsection (b), 110 per centum of such comparable price, adjusted in the same manner, in lieu of 110 per centum of the parity price so adjusted;

(2) the market price prevailing for such commodity on October 1, 1941;

(3) the market price prevailing for such commodity on December 15, 1941; or

(4) the average price for such commodity during the period July 1, 1919 to June 30, 1929."

Subsection (b) provides that "for the purposes of this act, parity prices shall be determined and published by the Secretary of Agriculture as authorized by law. In the case of any agricultural commodity other than the basic crops corn, wheat, cotton, rice, tobacco, and peanuts, the Secretary shall determine and publish a comparable price whenever he finds, after investigation and public hearing, that the production and consumption of such commodity has so changed in extent or character since the base

period as to result in a price out of line with parity prices for basic commodities."

Subsection (c) provides that "on maximum price shall be established or maintained for any commodity processed or manufactured in whole or substantial part from any agricultural commodity below a price which will reflect to producers of such agricultural commodity a price for such agricultural commodity equal to the highest price therefor specified in subsection (a)."

Subsection (d) provides that "nothing contained in this act shall be construed to modify, repeal, supersede, or affect the provisions of the Agricultural Marketing Agreement Act of 1937, as amended, or to invalidate any marketing agreement, license, or order, or any provision thereof or amendment thereto, heretofore or hereafter made or issued under the provisions of such act."

Subsection (e) provides that "notwithstanding any other provision of this or any other law, no action shall be taken under this act by the Administrator or any other person with respect to any agricultural commodity without the prior approval of the Secretary of Agriculture; except that the Administrator may take such action as may be necessary under section 202 and section 205 (a) and (b) to enforce compliance with any regulation, order, price schedule, or other requirement with respect to an agricultural commodity which has been previously approved by the Secretary of Agriculture."

Subsection (f) provides that "no provision of this act or of any existing law shall be construed to authorize any action contrary to the provisions and purposes of this section."

The Wealth of British Malaya

WITH the fall of Singapore, the keystone of the defense structure of the United Nations in the South-western Pacific has been engulfed in the tide of Japanese conquest. It means that, for the time being, all of British Malaya has fallen into Japanese hands. What is it, then, that the Japanese gained when the British were forced to abandon Malaya? The answer lies in the country's geographical position and in the fact that Malaya is the world's most important source of rubber and tin.

The Malaya Peninsula, a narrow tongue of land occupying the extreme southeastern corner of Asia, lies midway between India and China. On the north, it borders on Burma and Siam, and on the northwest on the Bay of Bengal, across which is India. The west coast of Malaya is washed by the Straits of Malacca, beyond which lies northern Sumatra, and the east coast by the South China Sea, which is part of the Pacific Ocean. On the extreme south is the island of Singapore, separated from the Peninsula by a strait about one mile wide. To the south and east of Singapore are numerous islands of the Netherlands Indies.

The geographic position of Singapore was the compelling factor in turning it into a great fortress. Standing between Japan, China, and the Malay Archipelago on the one hand, and India and Europe on the other, Singapore as a part of British Malaya constituted one of the most important lines in the chain of British naval strongholds. Geography has made Singapore equally important commercially, for it was not only a great distributing and transshipment center for the traffic of the Netherlands Indies and British Malaya, but also the business and shipping center for much of the trade between South-eastern Asia and the rest of the world.

THE area of British Malaya, amounting to 51,000 square miles, is about that of peninsular Florida. It is a mountainous country and more than two-thirds of it is covered with forests or mangroves that fringe considerable stretches of the coastline. Yet it is not the forests, but the available coastal plains, chiefly west of the mountain ranges, that have placed their imprint upon the economic development of Malaya. In fact, it has been noted that that development is almost entirely "one-sided," i. e., along the coast of the Straits of Malacca. There one finds the low-lying land for rice, coconuts and rubber planting under almost ideal conditions of soil and climate for those particular crops. The bulk of the tin has been found in the river valleys leading down to the west coast.

With Singapore only 75 miles north of the equator, the climate of British Malaya is tropical, but without the excessive heat that characterizes continental tropical areas. The soils of the Malay Peninsula are not as fertile as those of volcanic origin found in Java and in parts of Sumatra, but some of them are well adapted to the cultivation of rice and tropical crops. The country is sparsely populated, the total number of inhabitants in 1938 was estimated to be about 5,300,000, or an average of about 104 per square mile. The most thickly populated part of the country is the Straits Settlement (includes Singapore), where the average number of people per square mile in 1,080.

THE wealth of British Malaya is derived from agriculture and tin mining, but principally from the former. Just as in the case of the Netherlands Indies, agriculture falls into small-scale native farming and large-scale European plantation farming. The two types differ in a number of

fundamental respects. While an average native farm doesn't exceed a few acres, a European plantation ranges from 100 to several thousand acres. The methods of cultivation are adapted to local conditions, which equally affect large and small holdings, but the former are modified by the application of modern science. The plantations lay stress upon planting of high-quality and high-yielding strains and upon careful preparation of the product for the market. The native farmers, on the other hand, continue to rely mainly upon traditional methods. The plantations concentrate on the growing of one crop, the work being done by hired labor; the native farmers cultivate a variety of crops, only a small portion of which is intended for shipment abroad, whereas the plantations produce exclusively for export.

The total crop area of British Malaya is only slightly over 5 million acres, but it is the manner in which this relatively small acreage is exploited that accounts for Malaya's importance as an agricultural producer. Of the 16 recorded crops, rubber alone represents 65 percent of all the cultivated land, while rice and coconuts are responsible for 14 and 12 percent, respectively. The remaining 8 percent of the land is taken up by thirteen other crops. It is clear, therefore, that rubber has set the tone of Malaya's economic development.

The successful transplanting of seeds of the wild para tree in Malaya formed the genesis of the great plantation rubber industry in that country and the adjacent territories. Rubber can be grown with good results in any section of Malaya below an elevation of 1,000 feet, where the soil is suitable, climate is equable, without high winds, and the rainfall averages 100 inches per year. All these conditions prevail there, the result being that the rapidity of rubber-tree growth, the soundness of the trees, and yields are equal to those of any other rubber-growing country.

EXPANSION of rubber acreage in Malaya has been checked by occasional slumps, but on the whole it has been steady and rapid, never losing supremacy as the world's largest single producer. In 1939 Malaya's rubber area was estimated at 3.4 million acres, or about 40 percent of the total world rubber acreage. The Europeans were the first to plant rubber, but before long the natives followed suit. Of the total rubber area, 2,509 plantations account for 2,031,969 acres or 811 acres per plantation; the remainder of 1,261,074 acres is distributed among 197,000 small holdings or 6.4 acres per holding. Investments in plantation rubber alone are estimated at 275 million dollars. The increase in production was rapid and uninterrupted, reaching its peak during the 5-year period 1930-34 with an average annual output of 436,000 tons. The rubber-producing capacity was much above that, as illustrated by the fact that in 1940 Malaya produced a new high of 540,000 tons. In 1930-34 Malaya's rubber output accounted for 52 percent of the world total, but as a result of the expansion of rubber production in the Netherlands Indies its share declined to about 40 percent of the total.

Just as rubber is the most important agricultural crop of British Malaya, so is tin among minerals. British Malaya is the world's single largest tin producer; the 1940 output amounted to 85,000 tons, or 36 percent of the total world output. The importance of Malaya as a tin producer is not limited by its own output; it has also the refineries to smelt most of the tin mined in the Far East, and the latter accounts for 70 percent of the world output.

Considering the importance of rubber and tin as strategic raw materials, the place of Malaya as the world's largest source of these products cannot be overestimated. What Malaya means to the United States in this respect is revealed by trade between the two countries. United States imports from Malaya averaged over 193

million dollars annually in 1937-40, or 8 percent of total imports. At first glance this may not seem very large, but its real significance becomes apparent when it is noted that 96 percent of all American imports from Malaya was represented by rubber and tin. More specifically, it meant that the United States depended upon Malaya for 57 percent of its rubber and 73 percent of its tin.

IN the course of four or five decades British Malaya has been transformed from a backward country to one of the richest agricultural regions of the world. The planters, the rubber manufacturers, the tin mine owners, the treasury of the Malaya Government, and all other interests connected with these industries were richly rewarded by the mounting production and export of those two products. It would be erroneous, however, to judge the wealth of Malaya from the standpoint of these interests; the question remains as to the welfare of the native farmers under the impact of a dominating plantation industry, fostered by the British colonial administration.

The effects of Malaya's new political and economic pressure upon the natives have not been without their advantages. Security of native property rights, liberation from the arbitrary dictates of the native chiefs, an end to local warfare, enjoyment of economic gains as the native sees fit, better sanitary and transportation facilities—with the establishment of all these the British administration had much to do. It is difficult to measure such benefits in terms of economic well-being, but they may not be discounted.

On the cardinal question of land ownership, the British were not so de-

termined to preserve it for the natives as were the Dutch in the neighboring East Indies. To be sure, an important protective measure was brought about through the establishment of the Malaya Reservations, where land can be sold only to Malays. It is more likely, however, that the Reservations were chiefly aimed against encroachment by the Chinese rather than by the British land interests.

With respect to more direct effects, it must be noted that the natives are now responsible for one-fourth of the total output of rubber. The profits derived from rubber have been so considerable that many natives have neglected other crops, even food crops. Agricultural science, extensively applied on the plantations, is little known on the small scale native farms, but some of the benefits of improved agricultural methods are brought to the attention of the farmers by the expanding Department of Agriculture, experiment stations, and their respective field services. On the whole, the benefits were indirect rather than direct; they were accidental byproducts of the plantation economy, in the development of which the role of the natives has been a passive one.

Whether the wealth of Malaya was properly distributed among the various groups exploiting the country is an academic question now. All this wealth is at present in hostile hands and the prosperity of Malaya has gone for the time being. The economic losses to the United Nations far outweigh the purely economic gains to the enemy. It is to be hoped that the loss is a temporary one and that a liberated Malaya will before long take its place in a free world economy.

W. LADEJINSKY,
*Office of Foreign Agricultural
Relations.*

Marketing and Distribution

AT no other time in the history of the country have problems of distribution loomed so large as now. War conditions are dislocating markets and causing serious transportation problems. Scattered efforts are being made to cope with these now-accentuated marketing and transportation problems but their effectiveness has too frequently been limited by lack of basic information and broad planning. Today Federal and State agencies are challenged by this situation to cooperate in working out plans that will be effective in meeting it.

Detailed studies in specific localities such as have been carried on in the past serve their purpose, but they need to be integrated within a sound general plan for the marketing and transportation of farm products for the entire country. Until such a plan has been worked out, much of the effort of agencies genuinely interested in bringing about improvements will be wasted. It is obvious that the desirability of specific measures cannot be adequately judged without knowing how they will fit into the over-all type of marketing and transportation system that must eventually be developed.

Whenever an over-all plan for a distribution system for farm products shall have been worked out, discussed,

and agreed upon by all agencies concerned, then, and only then, will it be possible to enlist the support and cooperation of all groups in finding a way to bring about the desired improvements. The planning of such a system must be based, moreover, on fundamental analyses of the causes of the shortcomings of the present system of distribution. It must include consideration of both the economic factors involved and the actual physical movement of the products. Only in that way can the whole distributive process be made to operate so as to move farm products to consumers most efficiently.

Until resources are available to attack the distribution problem in this broad way it cannot be claimed that we have an adequate program of marketing and transportation research—one commensurate with the seriousness of the problems now imminent. The Bureau of Agricultural Economics will do all it can to bring about a unified attack on the whole problem; in the meantime it will continue to work on as many as possible of the particular problems, selecting those for which the need for a solution seems to be greatest, and trying to determine what improvements are feasible and how they can be brought about.

HOWARD R. TOLLEY.

Changing Tenure Patterns and the War

CHANGES in the farm tenure pattern throughout the United States during the past decade can be summarized briefly as a trend toward larger farms operated by farmers who as tenants or owners had less security of tenure. In the operation of farms, increased dependence has been placed upon hired workers.

The moderate-size family-operated farm continued to lose out to larger super-sized family operated farms and to large-scale commercial farms. Small

farms, under 10 acres in size, increased in number by 41 percent in the country as a whole during the 10 years following 1930. This increase in small farms was particularly pronounced in industrial and mining regions where farming of small tracts was taken up to furnish supplemental employment for industrial workers during the depression. But the economic forces which brought about this increase in small farms have been altered considerably by World War II, and the trend may be

expected to be retarded substantially or even reversed during coming years. Many part-time farmers will continue to hold their farms as a place to live but they may do very little farming.

PRIOR to the outbreak of World War II, the plantation operators in the South had been shifting their workers rapidly from sharecropper status to wage laborer status. The number of croppers in the West South Central States alone declined nearly one-half from 1930 to 1940.

Part-owners in the Northern Great Plains had expanded their operations by the purchase and lease of additional land; though their numbers declined considerably. The manager-operated farms increased in the New England States, but declined in all other regions. The total number of farms in the United States decreased 3 percent during the decade, while the land in farms increased 7.5 percent. These two trends resulted in a 17-percent increase in the average size of farms. Farms operated by full owners alone increased by 6 percent during this period, while the proportion of farms operated by each of the other tenure groups declined. Manager-operated farms declined in number by 35 percent, sharecropper farms by 30 percent, part-owner farms by 6 percent, and tenant farms other than sharecropper farms, by 3½ percent.

These changes in tenure were the result of numerous economic forces arising out of the depression and the subsequent recovery, together with serious droughts in the Mid-Western States and increased technological progress in the operation of farms. Many changes were made in the Mid-Western States in the size of farms and tenure of farms due to the drought. Progress of technology has brought about permanent changes in land tenure irrespective of recurring cycles of depression and prosperity. Some of the recent changes in the tenure pattern, therefore, may be expected to

remain permanently in the absence of positive government action to alter such changes. Many of the changes, however, which occurred between 1930 and 1940 were due to conditions which no longer exist. In light of these changed circumstances continued disturbance of the land tenure situation may be expected.

WHAT the war may do to our present shifting tenure situation is largely conjecture. Some definite trends are beginning to appear though, and from these reasonably reliable predictions may be made. Most significant of the changes attributable directly to the war is the shortage of farm labor, as contrasted to serious unemployment among agricultural workers. Employment in war industries and absorption of men into the armed forces have not relieved the pressure of farm laborers and tenants for land equally throughout the country. Reports gathered in the summer and fall of 1941 reveal that little change had at that time occurred in the labor situation in the Mid-western States, while in the Eastern industrial regions the labor shortages had already led to the abandonment of some farms.

Irrespective of the demand for labor in the immediate locality of some farming sections, the drawing off of farm laborers and tenants probably will not be great, since farm people lack training and skills for industrial work. In the South, the colored sharecropper, for example, has had little experience that will adapt him to mechanical work. But in sections where highly mechanized agriculture predominates, both laborers and tenant farmers have had experience with tractor and machinery which fits them more readily into industrial employment. Health is another factor; many farm people are physically unfit for acceptance into the armed forces, and the pressure of these groups for employment in agriculture has not been relieved.

THE consolidation of farms is a significant trend in the changing tenure picture. The economic improvement in agriculture in the late '30's gave impetus to the tendency for operators to expand their holdings. Now, the higher prices due to war demands is undoubtedly giving additional incentive for expansion, to the extent that labor and farm machinery may be obtainable.

Increased technology has contributed to the recent trends toward larger farms and the displacement of small operators. Farmers are able to work large and widely separated acreages by the use of modern high speed rubber tired tractors and machinery. In some Mid-Western areas it is reported that farmers have not hesitated to operate the farms as much as 40 miles away. But if the war continues beyond the time when replacements of farm machinery and tires must be made, this type of operation will be considerably restricted. Landlords will be compelled to lease their scattered farms to individual family type operators instead of to large-scale operators.

THE economic forces arising out of the war are going to reverse some of the trends in land tenure that occurred during the last 10 years whereas others will be strengthened.

The trend toward owner-operatorship will probably be strengthened. The trend toward the use of wage laborers in place of sharecroppers in the South doubtless will be slowed considerably, but probably not reversed. Consolidation of contiguous farm units will continue, while expansion of non-contiguous large-scale operations will slow down. The decline in the percentage of tenancy occurring in 1935 for the first time in 55 years and again in 1940 will continue for a time, but there is little prospect for a continued downward trend.

The security of tenure of both owners and tenants will be strengthened during the war, but there is little likelihood that this more favorable tenure trend will continue long after the war. Farmers who are now acquiring ownership on a shoestring will be faced with a serious danger of falling back down the tenure ladder. Increased land values and mortgage debt will result in higher fixed land charges that farmers must pay and thus weaken their security of tenure. Concentrations of economic power in the agricultural marketing and processing industries, in farm credit agencies, and in land ownership will all tend to weaken the security of tenure of individual farm operators.

ELCO L. GREENSHIELDS.

Uses for Abandoned Farm Land

IN the Northeast, large areas of land that once supported farm families have gone out of agriculture. Some of this land has been absorbed by the growth of cities, some is occupied by part-time farmers or rural residents whose livelihoods depend, in varying degrees, on nonfarm income. Much of it, however, no longer supports occupancy of any kind and is being used in a variety of ways, ranging from practically no use to fairly intensive use in connection with nearby operated farms.

During the defense period it may be desirable to make further use of some of this abandoned and unoccupied farm land in order to obtain the needed farm production. Some ways in which this may be done have already been demonstrated:

In the dairy sections of the Northeast, dairy heifers and dry cows from nearby farms are often pastured on such land. This practice is usually found where intensive dairy farms in the valleys are located within a few miles of abandoned farm land in the

hills. In these cases farmers apparently have found that pasturage can be obtained most efficiently by going back into the hills. Some valley farms, of course, have contiguous hill land which is used for pasture.

In the few areas of the Northeast where sheep are important, a similar pasture use is sometimes found. In Yates County, New York, a recent study of the agriculture in two towns showed that about one-half of the farms having sheep were pasturing their sheep on detached land which at one time had supported farm units by itself. This pasture averaged 3.8 miles from the home farm although, in a few cases, the sheep trotted out more than 10 miles. Farms using detached pasture had about 100 acres of such pasture per farm. About one-half was owned by the user and the rest was rented.

THE use of abandoned detached farm land for livestock pasture in the Northeast is somewhat com-

parable to the western practice of pasturing livestock on dry-land grazing areas which may be at considerable distances from the irrigated sections where the winter feed is grown. In general, however, the amount of winter feed required per animal is much higher in the Northeast.

In a more limited way, such land is also being used, in connection with nearby farms, for crops such as hay, grain, potatoes, and vegetables. This development has been aided greatly by rubber-tired farm equipment which has made non-contiguous farming more feasible. The extent of this use may vary from year to year depending on prospective demand.

This evidence indicates that some land which has not been productive enough to support farm units by itself, still has farming possibilities in combination with other land. Such possibilities are especially significant at times like these when rather quick increases in agricultural production are needed. MERTON S. PARSONS.

Livestock Products in 1942

AS of January 1 each year the Department of Agriculture makes an estimate of the number and value of livestock on farms. The figures are especially significant this year, by way of indicating the possibility of reaching the farm production goals for 1942. The report shows that the number of meat animals on farms is now the largest on record, aggregating more than 190 million head of cattle, hogs, and sheep.

Interest centers in the high record of nearly 75 million cattle and calves. To increase the supply of beef and veal this year over last the food goals call for the slaughter of 28 million cattle and calves, about 2 million more than the total number slaughtered in 1941. A total slaughter of this size would about equal the number of calves raised this year, after allowing for death losses, and cattle numbers at

the beginning of 1943 would not differ greatly from the approximately 75 million head this year.

The Government livestock specialists suggest that increased quantities of beef and veal be obtained principally by increased marketings in States producing cattle mainly for beef. They add that in all areas, a sound balance between forage and feed supply and care of livestock is vital to the maintained cattle production needed during the war period.

CATTLE numbers in the range States have been increased greatly in recent years. It is reported that in many areas the ranges are stocked beyond the normal limits of grazing capacity, and that a forage shortage in these areas would seriously affect the calf crop and retard the growth of animals. It is suggested that sales

of 95 to 96 percent of the saved calf crop plus inshipments in the range States would allow for the maintenance of herds and for death losses of cattle and calves.

It is believed that in the North Central States an increase in livestock production is possible as a result of conservation adjustments in recent years. The Government specialists suggest increased feeding and continued heavy marketings in the Corn Belt States, but a slight decrease in total cattle marketings from States where dairying is important. A relatively larger percentage of the numbers marketed from these States will be represented by calves.

Production goals for 1942 call for an increase of 8 percent in the output of milk. The Government estimates show that on January 1 this year there were 26.3 million cows and heifers 2 years old and over kept for milk on farms, or 3 percent more than on that date last year. This is a near-record, but it is obvious that heavier feeding will be required if the 1942 production goal is to be reached. The figures show also that on January 1 the farmers also had high record numbers of yearling heifers and heifer calves being kept for milk cows—5.8 million and 6.5 million, respectively.

THE big increase in the 1941 fall pig crop is reflected in the total of 60.5 million hogs and pigs on farms this January 1. This figure is 12 percent larger than the number on farms at the beginning of 1941 but slightly smaller than at the outset of 1940. Of the 1942 total, more than 11 million were in Iowa, nearly 6 million in Illinois, more than 4 million each in Indiana and Minnesota, and nearly 4 million in Missouri. It is estimated that marketings and farm slaughter of hogs this year will total nearly 20 billion pounds live weight, or about 17 percent more than in 1941.

Sheep and lambs totaled nearly 56 million head on January 1, or about 3 percent more than on that date last year. The total consisted of 46.2

million head of stock sheep and 6.8 million sheep and lambs on feed. The January 1 total was the largest on record. It is expected that about 23 million sheep and lambs will be marketed this year, or about 2 percent more than the number slaughtered in 1941. Production of sheep and lambs will probably increase by an equivalent amount.

THE inventory shows there were nearly 474 million chickens (not including broilers) on farms as of January 1, or about 12 percent more than on that date last year. The total is a near record. Farm flocks were made up of 58 percent pullets, 32 percent hens, and 10 percent other chickens. This compares with 57 percent pullets, 33 percent hens, and 10 percent other chickens a year earlier. Turkeys totaled 7.7 million as of January 1, or 6 percent larger than a year earlier, and 22 percent above the average for the preceding 10 years.

Total supplies of chicken meat in the United States this year are expected to exceed the record supplies of 1941, and a further increase in the number of chickens raised on farms is in prospect. Government poultry specialists forecast a material increase in commercial broiler production, even though broilers are not included in the general price-supporting measures announced by the Department of Agriculture.

The number of both horses and mules continues to decline. The inventory shows less than 9.9 million horses (including colts) on farms January 1, or about 4 percent fewer than on that date last year. Mules totaled 3.8 million on January 1, or 3 percent fewer than a year earlier. Figures on numbers of horse colts and mule colts indicated a continued decline during the next few years.

THE farm value of all livestock included in the inventory was slightly more than 7 billion dollars, as compared with 5.3 billion in 1941,

Livestock on Farms in the United States, Jan. 1, 1930-42¹

Year	Horses and mules	All cattle	Milk cows	All sheep	Hogs	Chickens	Grain-consuming animal units ²
	1,000 head	1,000 head	1,000 head	1,000 head	1,000 head	1,000 head	Thousands
1930	19, 124	61, 003	23, 032	51, 565	55, 705	468, 491	135, 807
1931	18, 468	63, 030	23, 820	53, 233	54, 835	449, 743	134, 945
1932	17, 812	65, 801	24, 896	53, 902	59, 301	436, 815	139, 468
1933	17, 337	70, 280	25, 936	53, 054	62, 127	444, 523	144, 492
1934	16, 997	74, 369	26, 931	53, 503	58, 621	433, 937	143, 169
1935	16, 683	68, 846	26, 082	51, 808	39, 066	389, 958	120, 518
1936	16, 226	67, 847	25, 196	51, 087	42, 975	403, 446	123, 032
1937	15, 802	66, 098	24, 649	51, 019	43, 083	423, 921	122, 402
1938	15, 245	65, 249	24, 466	51, 210	44, 525	389, 624	120, 963
1939	14, 792	66, 029	24, 600	51, 595	50, 012	418, 591	127, 003
1940	14, 481	68, 197	24, 926	52, 399	61, 115	438, 288	138, 492
1941	14, 136	71, 461	25, 478	54, 283	54, 256	422, 909	133, 449
1942	13, 667	74, 607	26, 303	55, 979	60, 526	473, 933	142, 742

¹ Revised 1930-41; 1942 preliminary.

² Weights used: Horses and mules 1.14, milk cows 1.00, other cattle 0.51, hogs 0.87, sheep 0.04, chickens 0.045.

with 5.1 billion in 1940, and with 4.4 billion average for the 10 years 1931-40. Of the 1942 total the value of cattle was 4.1 billion dollars, hogs 947

million dollars, horses 639 million, sheep 482 million, mules 410 million, chickens 394 million, and turkeys 24 million dollars.—F. G.

On the Farm Labor Front

TWO recently concluded agreements between the United States Employment Service, the Farm Security Administration, and the Agricultural Marketing Service, are expected to result in increasingly effective mobilization of labor for farm jobs.

Under the terms of the agreement with the Farm Security Administration, the United States Employment Service—which had already expanded its farm placement facilities to cover the entire Nation—will establish branch offices in each of the migratory labor camps. These offices will make their facilities "available at all times to workers housed in the migratory labor camps and to other agricultural workers in the community."

The cooperative attack of the Farm Security Administration and the Employment Service on farm labor supply problems is designed to reduce the delay in filling jobs and to make possible a fuller utilization of available labor. On the West Coast and in other areas where Farm Security

camps have been in existence, close cooperation between local offices of the two agencies has increased the effective use of farm workers as much as 50 percent. This year, when mobile migratory camps are set in operation along the Atlantic Coast, farmers who depend on a regular, seasonal flow of workers from Florida on up to New England, should benefit from the intensive recruiting made possible by the agreement.

The cooperative agreement between the Agricultural Marketing Service and the Employment Service is intended to supply the Employment Service with agricultural information by counties and crop areas so that the Employment Service can plan and act concretely in its task of matching the demand for farm labor with the necessary workers. Specific information will be provided by the Agricultural Marketing Service on agricultural production (acreage; livestock, poultry numbers, and products; changing conditions and production prospects;

crop maturity dates; period and peak of seasonal activities), the on-farm labor supply, days worked per week by the farm operator, length of farm work day (separately from operator and hired workers), average farm wage rates (by month, day, hour, piece), and the perquisites furnished hired hands.

NEITHER of these agreements, obviously, constitutes the complete answer to the problem of supplying labor for agriculture this year. There is not enough farm help in many sections of the country. The armed forces and war industry have drawn off many workers. Workers who have left nondefense employment for war jobs have been replaced, in many cases, by rural youth attracted by higher wage scales. Undirected migration of workers—aimless traveling in search of work—has created labor surpluses in some areas and shortages elsewhere. What is needed in agriculture today is a fuller utilization than ever before of the total labor supply. To achieve this means calling on people who have never been in the labor market before. And it means setting up a mechanism for keeping aimless migration to a minimum; in short, a national approach to what is now a national problem is necessary.

To help meet this problem, the United States Employment Service recently reorganized and strengthened its farm placement service, so that at the present time, each one of the 1,500 full-time local employment offices has a person on its staff responsible for farm labor placement. In addition, there are 3,000 part-time offices, and additional facilities will be set up in the future. If, in his community, the labor situation is such that high school students are needed to bring in the crops, the local farm placement man will enlist the aid of the schools. Connecticut, New York, Oregon, and numerous other States have already found it necessary to call on students. In addition, employment offices in some parts of the country are now con-

ducting house-to-house canvasses to make sure that no part of the total local labor resources is overlooked.

If migratory labor is needed, the local man can call on other employment offices in the State or in other sections of the country for help in finding workers. And, in certain Western States, the offices have enlisted the aid of plant quarantine stations and the State police in directing workers to the places where they were needed. To make sure that local offices render an effective service and that their activities are properly coordinated within a State, farm placement supervisors have been appointed for each State division of the Employment Service. And since the agricultural labor problem transcends State boundaries, regional farm placement representatives are charged with the responsibility for seeing that the employment offices in the States which make up their region work smoothly in recruiting and directing labor where it is needed.

AT all levels—local, State, regional, and national—the problem of farm labor supply is being attacked in close cooperation with the Department of Agriculture. Employment Service men—in the counties and in the States—have worked on the labor subcommittees of the Bureau of Agricultural Economics. On a regional basis, Agriculture Department representatives have membership in the regional labor supply committees which concern themselves with all aspects of labor supply—industrial and agricultural—under the chairmanship of United States Employment Service representatives. Finally, in mapping out our program and in planning for necessary extension of employment office facilities, we have worked closely with the Office of Agricultural Defense Relations and with other agencies of the Department of Agriculture in Washington.

For the farmer and farm worker alike, this cooperation between the Department of Agriculture and the United States Employment Service

should prove of value in the months ahead when production goals must be met since it makes possible a placement program geared to meet the needs of both employer and worker. To help the farm employer who makes known his requirements at the nearest United States Employment office, that office will canvass the community and, if necessary, other communities in the State or Nation to find the needed workers. And if the farm employer will notify the local employment office a short time before he expects to lay off his help, plans can be made to refer the workers to other agricultural jobs. The result will be greater efficiency in the mobilization of manpower.

FAY W. HUNTER,
U. S. Employment Service.

WASTE

BAE says that wastes in the marketing and home consumption of perishable farm products reach an enormous total each year; that the wastes in the marketing of fresh fruits and vegetables alone would amount to several hundred million dollars a year if valued at retail prices. "These wastes restrict the diets of consumers and increase the spread of marketing costs between farmers and consumers."

Two ways of reducing these losses are suggested: (1) Reduce waste in marketing and in the homes; (2) utilize the waste materials to best advantage. The Bureau is now working on suggestions for improved merchandising practices to reduce the waste in marketing. As to better utilization, it says that the cooperation of public-health officials, animal husbandmen, sanitary engineers, and economists is needed.

BAE made a survey of urban garbage production, collection, and utilization in 1939-40, found a total of 8 million tons of garbage produced in 412 cities having populations of 25,000 or more. Divided by the 53 million people in these cities, the figure works out to approximately 302 pounds of garbage per capita, or more than 1,200 pounds for the average family. Not all of this waste is in the home, however; much of it is by hotels, restaurants, and other establishments.

The survey showed that about 81 percent of the garbage is collected by the cities, the remainder by hog feeders and others. A little more than three-fourths of the garbage collected by cities is incinerated or buried, the remainder used by hog feeders, "reduced," or otherwise reclaimed. Combining direct collections and those from city disposal agencies, it was found that about 27 percent of the 8 million tons of garbage produced in 1939-40 was used by hog feeders.

* * *

Some figures on garbage production are cited for the 10 largest cities: New York, 328 pounds per capita in 1939; Chicago, 212 pounds; Philadelphia, 203 pounds; Detroit, 246 pounds; Los Angeles, 285 pounds; Cleveland, 281 pounds; Baltimore, 197 pounds; St. Louis, 196 pounds; Boston, 291 pounds; Pittsburgh, 313 pounds.

Total garbage produced in these 10 cities was 2.7 million tons in 1939, of which 2.4 million tons was collected by the cities, and the remainder by hog feeders and others. About 2 million tons collected by the cities was incinerated or buried, and the remainder used by hog feeders, "reduced," or otherwise disposed of.—F. G.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of industrial workers (1935-39 = 100) ²	Cost of living (1935-39 = 100) ³	Wholesale prices of all com- modities ⁴	1910-14=100			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in —				
					Living	Production	Living and production		
1925	90	126	125	151	164	147	157	176	270
1926	96	131	126	146	162	146	155	179	271
1927	95	128	124	139	159	145	153	179	277
1928	99	127	123	141	160	148	156	179	279
1929	110	134	122	139	158	147	153	180	281
1930	91	110	119	126	148	140	146	167	277
1931	75	85	109	107	126	122	124	130	254
1932	58	59	98	95	108	107	107	96	220
1933	69	61	92	96	109	108	109	85	188
1934	75	76	96	109	122	125	123	95	178
1935	87	87	98	117	124	126	125	103	180
1936	103	100	99	118	122	126	124	111	181
1937	113	117	103	126	128	135	130	120	186
1938	89	91	101	115	122	124	122	125	183
1939	108	105	99	113	120	122	121	123	186
1940	123	119	100	115	121	124	123	126	183
1941	156	163	105	127	133	133	133	147	---
1941—February	144	139	101	118	---	---	123	---	---
March	147	141	101	119	124	125	124	---	---
April	144	142	102	121	---	---	124	138	---
May	154	157	103	124	---	---	125	---	---
June	159	167	105	127	129	128	128	---	---
July	160	173	105	130	---	---	130	160	---
August	160	174	106	132	---	---	133	---	---
September	161	177	108	134	136	135	136	---	---
October	163	178	109	135	---	---	139	165	---
November	166	180	110	135	---	---	141	---	---
December	167	187	110	137	143	141	142	---	---
1942—January	171	193	112	140	---	---	146	166	---
February ⁷	173	---	---	141	---	---	147	---	---

Year and month	Index of prices received by farmers (August 1909–July 1914=100)							Ratio prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	
1925	157	177	172	153	140	153	163	156
1926	131	122	138	143	147	152	159	145
1927	128	128	144	121	140	155	144	139
1928	130	152	176	159	151	158	153	149
1929	120	144	141	149	156	157	162	146
1930	100	102	162	140	133	137	129	126
1931	63	63	98	117	92	108	100	87
1932	44	47	82	102	63	83	82	65
1933	62	64	74	105	90	82	75	70
1934	93	59	100	103	68	95	89	90
1935	103	101	91	125	118	108	117	108
1936	108	100	100	111	121	119	115	114
1937	126	95	122	123	132	124	111	121
1938	74	70	73	101	114	109	108	95
1939	72	73	77	105	110	104	94	93
1940	85	81	79	114	108	113	96	98
1941	96	113	92	145	146	131	123	122
1941—February	81	80	80	156	130	118	90	103
March	84	82	83	134	129	118	90	103
April	90	88	89	161	137	121	104	110
May	93	98	89	146	138	124	107	112
June	16	107	97	146	144	126	118	118
July	98	121	93	130	154	132	127	125
August	99	123	100	133	158	135	130	131
September	106	150	89	145	166	140	141	139
October	101	144	107	164	157	145	146	139
November	103	136	98	147	151	148	157	135
December	112	138	98	162	160	148	153	143
1942—January	119	143	102	204	168	148	147	149
February	121	150	98	161	175	147	135	145

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Adjusted for seasonal variation. Revised November 1941.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909–July 31, 1914.

⁷ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

FOOD FOR OUR FIGHTING FORCES THE AGRICULTURAL • SITUATION •

APRIL 1942

A Brief Summary of Economic Conditions

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War Production and Conservation

AMERICAN AGRICULTURE is face to face with the biggest, toughest job in the history of farming. This year, next year, and for as many years thereafter as necessary, America's farmers and America's farm lands must produce more food, more oils and fats, and more fiber than anyone ever dreamed of before. It must be done to beat Hitler, the Japanese war lords, the Fascists of Italy.

America's farmers and farm lands must produce gigantic amounts of Food for Freedom—represented by the Nation's food production goals—because we can't win the war without food. The plain, hard fact is that we must not only feed and clothe our soldiers, sailors, marines, and airmen, but feed and clothe our own industrial workers, the rest of the United States population, a sizable portion of the armed forces and population of our allies, and on top of all that provide a reservoir of food for reconstruction days after the war.

This is a job demanding the most we have in efficiency of work and planning. We must be as relentlessly thorough on our farm lands as we are in our bomber plants. That means planning for 1943 and 1944 as we produce in 1942. That means producing the conservation way.

TOO many people associate conservation with some passive, preservative action aimed at restoring a former status quo. Such an interpretation of modern soil conservation farming is a terrible libel. Conservation farming as it has been developed during the past ten years is the most dynamic, efficient type of farming this country has yet known. With it, America's farmers will do their part in war production. Without it, no one can predict what will happen.

Positively stated in terms of the present, conservation means the most efficient use of our land now and in the immediate future. It means increasing yields per acre and per animal unit *this year*. It means paving the way for still greater increases next year and the next.

The simple fact is that, unless we have more positive conservation on more farms than ever before, we shall be unable to reach our 1942 production goals, and we shall fall short on the added demands certain to be made as the war advances.

Think back to agriculture's experience in the first World War. It was a short war for us—we were in it only 19 months—and yet agriculture was just barely able to do what was asked of it. And this was done only by disregarding the future, recklessly plowing up acres that should not have been in cultivation and throwing everything we had into a gamble that it would be a short war. We won on that, but we might not have been so lucky if it had been a long war.

ANY number of examples can be cited to show how soil conservation measures can step up production at once—this year. Consider tomatoes, for example. Tomatoes are one of the most urgently needed war crops. Obviously, anything that can be done to increase the tomato yield per acre is a positive contribution to the war effort. And one of the most promising means of getting more

tomatoes is through mulching. One can almost double the tomato yield, in addition to improving both size and quality, by mulching tomato vines with 3 tons of straw per acre.

Or consider the case of green silage, something that is of great importance to dairy farmers in the realization of dairy production goals. Plots of corn drilled up and down the slope lose nearly twice as much water and approximately 10 times as much soil as plots of corn drilled across the slope—and the tonnage produced per acre is much lower than can be obtained from land that is contour-cultivated.

A farmer in Minnesota increased his butterfat production almost 14 percent per cow by planting different varieties of grasses to maintain good pasture throughout the season. * * * A rancher in Wyoming, by improving his watering and grazing system, managed to get an additional pound of wool per sheep, and his lambs averaged eight pounds heavier. That is something we ought to keep in mind as we try to make up for imports of wool lost because of the war.

FOR years conservation methods such as these have been an important part of the national farm program and of Federal and State recommendations. Through the Department and the land-grant colleges, millions of farmers in all parts of the United States have been persuaded to adopt these practices and others like them as sound helps to better farming, although here we must admit that popular acceptance has come slowly and has not yet reached as high a level as the merits of the case warrant. But, once the farmer sees conservation as a vital aid to immediate, practical production, it becomes a basic part of his farm operations.

There is a realistic truth, I think, in my illustrations of ways in which many soil conservation practices can be brought into a vital, down-to-earth relationship to current plans for pro-

duction. You know it, and every farmer who has ever used these practices also knows it.

It seems to me the situation comes down to this: We must strengthen and vitalize the conservation practices that mesh into the war production drive now in progress. And the conservation practices which will not directly contribute to the war effort this year or in the near future, must be set aside for the duration. This calls for a thoroughgoing analysis of present practices by all of us—departmental staff experts, field workers, farmer-administrators of action programs—so that our determinations may be made with a maximum benefit to the present war production effort in all needed commodities and all areas.

I see no great obstacle to such a determination provided we always keep in mind the objectives of balanced, maximum, wartime production. This is the paramount consideration which must govern all our thinking and decisions. The shift of emphasis from the extreme long-range to the immediate objectives involves a psychological change—a recognition that unless we do what is needed to win the war there will be little prospect indeed for the survival of all we have attempted to build. First things must come first—and today!

DILLON S. MYER,
Acting Administrator,
*Agricultural Conservation and
Adjustment Administration.*

Commodity Reviews

PLANTINGS: Intentions

FARMERS are planning to put in record-breaking acreages of many crops this spring in response to the Nation's call for food. Biggest increases over a year ago will be in acreages of oil crops—peanuts, soybeans, and flaxseed. Total acreages of feed crops will be increased to provide for the high-record numbers of livestock and poultry on farms and ranches, and to replenish granary supplies. Increases are indicated for all major crops except wheat and grain sorghums this year over last.

In a report on prospective plantings for 1942 the Crop Reporting Board stated on March 24:

"There will be unusually large shifts between crops and a 3 to 4 percent increase over last year in the total crop acreage according to the annual March survey of farmers' 'intentions to plant.' Judging from the reports received from 77,000 farmers, outstandingly large acreages will be planted to crops that can be crushed for the vegetable oils which are now urgently

needed. Thus, the indications are that the acreage planted to soybeans for all purposes will be increased 41 percent to 14 million acres, that the acreage of peanuts will be increased 66

United States: Planted Acreages 1930-39 and 1941, and Prospective Plantings for 1942

Crop	Average 1930- 39	1941	Indi- cated 1942	1942 as per- cent of 1941
	<i>Thou- sands</i>	<i>Thou- sands</i>	<i>Thou- sands</i>	
Corn, all	101,081	87,164	91,348	104.8
All spring wheat	21,762	16,741	15,287	91.3
Durum	3,418	2,597	2,201	84.8
Other spring	18,344	14,144	13,086	92.5
Oats	39,196	39,363	40,377	102.6
Barley	12,713	15,080	18,208	120.7
Flaxseed	2,406	3,367	4,037	119.9
Rice	943	1,257	1,454	115.7
All sorghums	12,157	18,169	17,070	94.0
Potatoes	3,365	2,793	2,814	100.7
Sweet potatoes	882	759	776	102.2
Tobacco	1,676	1,350	1,446	107.1
Beans, dry edi- ble	1,942	2,304	2,412	104.7
Soybeans ¹	5,467	9,996	14,085	140.9
Cowpeas ¹	2,647	3,780	3,898	103.1
Peanuts ¹	1,951	2,498	4,150	166.1
Tame hay ²	56,102	59,232	60,831	102.7
Sugar beets	883	795	983	123.6

¹ Grown alone for all purposes. Partly duplicated in hay acreage.

² Acreage harvested.

percent to more than 4 million acres and flaxseed increased 20 percent to 4 million acres.

"To provide for the record numbers of livestock and poultry on hand farmers are also planning to increase the total acreage in feed crops. The indicated changes from last year's plantings include a 5 percent increase in corn to 91 million acres, a 3 percent increase in oats, a 21 percent increase in barley, 3 percent more land in tame hay, and 6 percent less land used for sorghums. If these plans are carried out the total acreage to be planted to feed grains will be increased 6 percent which about balances the 7 percent increase during 1941 in grain consuming livestock, including poultry, and the similar increase expected in 1942. There would be also a record acreage of tame hay and forage. If the usual acreage of wild hay is cut, the total hay and forage acreage would seem to be ample for requirements under ordinary weather conditions.

"Other large changes from last year that are now in prospect are a 24 percent increase in the acreage planted to sugar beets to a near record total and a 16 percent increase over last year's large acreage of rice. Smaller, but important increases of 5 and 3 percent are indicated for dry beans and cowpeas which would give record acreages of each. Potatoes and sweetpotatoes show increases of 1 percent and 2 percent and tobacco 7 percent over last year, but even with these increases the acreage of each of these crops would be somewhat smaller than has usually been grown. Tomatoes and peas for canning, onions and early cabbage will be grown on much larger acreages than last year, but current reports on other vegetables do not yet indicate any material changes in their total."

COTTON: Long Staple

Secretary Wickard asks the Nation's cotton farmers to plant their full national acreage allotment of about 27.4 million acres of cotton this year.

But he urges that as much of this allotment as possible be planted to medium and longer staple varieties so as to assure adequate supplies needed to meet military requirements.

The secretary emphasizes that this does not mean that allotments will be increased in 1942, or that farmers are being asked to exceed cotton allotments. Farmers last year underplanted the national cotton allotment by some 4 million acres. The 1941 crop of 11 million bales was produced from 23.3 million planted acres.

"It is especially important," Secretary Wickard says, "that farmers plant their full cotton allotments in those areas which normally produce cotton of a staple length of 1 inch or better, and where the planting of the full allotment will not reduce the acreage planted to other oil crops. Besides helping to meet the need for longer staple lengths, increased cotton production in these areas will add considerably to our supply of vegetable oils."

Citing the need for more long staple cotton, the Secretary said that the carry-over of American cotton in the United States on August 1 next will be about 10 million bales, of which it is estimated that about 6 million bales will be under 1 inch in staple length. Increased production of military goods is consuming more than the normal volume of the longer staple and higher-grade cottons.

Domestic demand for cotton continues strong. A further increase in domestic mill consumption is expected this year.

PRICES: Down

Prices received and prices paid by farmers have moved in opposite directions since the beginning of 1942. Prices received by farmers for crops and livestock products have gone down on average, prices paid for commodities and services used in agricultural production have gone up. On the higher side are the prices paid for feed

and the wages paid for farm labor, on the lower side the prices received for dairy products, chickens and eggs, and miscellaneous products. Ratio of prices received to prices paid was 99 in March, compared with 102 in January, and with 83 in March last year.

Index Numbers of Prices Received and Paid by Farmers

1910-14=100

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1941			
January.....	104	123	85
February.....	103	123	84
March.....	103	124	83
April.....	110	124	89
May.....	112	125	90
June.....	118	128	92
July.....	125	130	96
August.....	131	133	98
September.....	139	136	102
October.....	139	139	100
November.....	135	141	96
December.....	143	142	101
1942			
January.....	149	146	102
February.....	145	147	99
March.....	146	148	99

¹ Ratio of prices received to prices paid.

² Revised.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and States]

Product	5-year average, August 1909-July 1914	March average 1910-14	March 1941	February 1942	March 1942	Parity price March 1942
Cotton, lb.....	12.4	12.4	9.72	17.80	18.06	18.35
Corn, bu.....	64.2	61.3	57.1	76.6	78.4	95.0
Wheat, bu.....	88.4	88.9	71.8	104.9	105.1	130.8
Hay, ton.....	11.87	12.06	7.93	10.76	11.03	17.57
Potatoes, bu.....	69.7	67.5	53.9	104.5	103.9	104.7
Ons, bu.....	39.9	40.3	33.7	52.0	51.9	59.1
Rice, bu.....	81.3	.....	98.1	161.8	168.6	120.3
Peanuts, lb.....	4.8	4.8	3.46	5.44	6.03	7.10
Tobacco:						
Fire-cured, types 21-24 lb.....	13.6	.....	9.3	13.3	12.9	12.5
Burley, types 31 lb.....	22.2	.....	.....	24.4	.....	26.2
Maryland, types 32 lb.....	22.9	.....	.....	30.0	30.0	21.1
Air-cured, dark, types 35-37 lb.....	11.2	.....	7.9	11.1	11.8	10.3
Cigar binder, types 41-55 lb.....	21.0	.....	12.2	13.2	13.5	19.3
Apples, bu.....	96	1.11	97	1.20	1.30	1.42
Beef cattle, cwt.....	5.21	5.29	8.27	9.93	10.26	7.71
Hogs, cwt.....	7.22	7.41	7.06	11.64	12.34	10.69
Chickens, lb.....	11.4	11.4	14.4	17.4	18.0	16.9
Eggs, doz.....	21.5	19.6	16.4	27.5	25.8	26.1
Butterfat, lb.....	26.3	27.1	30.7	36.2	35.7	40.4
Wool, lb.....	18.3	18.7	33.4	37.1	38.3	27.1
Veal calves, cwt.....	6.75	6.92	9.71	12.05	12.23	9.99
Lambs, cwt.....	5.87	6.22	8.92	10.48	10.36	8.69

¹ Revised.

² Post-war base.

³ Base price crop years, 1934-38.

⁴ Base price crop years, 1919-28.

⁵ Adjusted for seasonality.

FARM LABOR: Peak

Farm labor requirements are rising to a seasonal peak for spring work, with prospects that farmers will find slightly fewer workers and will have to pay higher wages this year than last. Competent observers believe, however, that the available supply of labor used with greater efficiency will be sufficient to put in the increased acreages of food and feed crops needed this year.

A tightening of the farm labor supply situation is likely to come at harvest time when farmers will face increased competition of the war industries for labor. But farmers by and large assure Government in this time of need for more food, that "if we can get the crops produced, we'll get them harvested." To do this job will mean heavier work for all--for hired hands and farm family workers alike.

The pressing need for food in abundance will probably see many new workers on the farms this year--persons who have never before worked in agriculture. There will be considerable reliance upon high school boys in some areas to help harvest the crops, and upon the cooperation of public and private agencies everywhere to recruit farm workers of all kinds. In practically every agricultural county there will be a farm placement office of the United States Employment Service, continuously active in trying to bring farm work and farm workers together.

Considering the tight labor supply and demand situation, it seems certain that farm wages will average higher this year than last--possibly 20 percent higher.

WHEAT: "Volunteer"

Much has been heard of "volunteer" wheat in recent months, and the Department of Agriculture has announced changes in Triple-A regulations designed to make the maximum use of this grain. ("Volunteer" wheat is

from kernels which shattered and fell to the ground during the 1941 harvest and were then germinated by fall rains. This year the volunteer growth has been more vigorous than usual, large acreages occurring in a group of Great Plains States including parts of Kansas, Oklahoma, northern Texas, Nebraska, Colorado, and Montana.)

The Department has announced that farmers who choose to harvest their volunteer wheat will be able to earn both agricultural conservation and parity payments provided that (1) their acreage of seeded wheat is within their 1942 allotments and they comply with other provisions of the AAA program; (2) they store their volunteer wheat on the farm as long as it is subject to a marketing quota penalty, and (3) they seed within their 1943 wheat acreage allotments.

In computing conservation payments, farmers will be permitted to count pasturing of volunteer wheat, pasture followed by feed crops as conservation practices. Volunteer acreage cut for hay or harvested for grain, however, cannot be included under conservation acreage. Payments will be held until actual 1943 compliance has been made. Farm-stored volunteer wheat will be eligible for a Government wheat loan at 50 percent of the usual rate.

MILK: Production

Milk is flowing in rising seasonal tide--to fluid markets and to processing plants. The total is the largest on record; it is about 4 percent larger to date this year than last, mainly on account of the larger number of cows on farms. Production per cow--as a national average--has been about 1 percent larger this year to date than last. (In New York, production per cow was about 8 percent larger this March 1 than last; in Wisconsin the increase was about 6 percent.)

Production of manufactured dairy products was considerably larger this winter than last, but a much larger ex-

pansion in production of dry skim milk is needed during the remainder of this year. Production of evaporated milk was 82 percent larger this January than last, of American cheese 52 percent larger, and of dry skim milk for human consumption 43 percent larger. Butter production was 11 percent smaller. BAE estimated in March that a considerable expansion in production of dry skim milk is needed to meet domestic and lend-lease requirements.

BAE added that "prices received by farmers for whole milk at wholesale probably will continue considerably higher than a year earlier during most of 1942. For the year as a whole, prices received by farmers for butterfat also may average higher than in 1941, but butterfat prices may be somewhat lower this summer than last when there was a rapid contraseasonal rise in prices." The Department of Agriculture announced in late March it would support butter prices at a minimum of 36 cents a pound for 92 score, carlot basis, at Chicago, with comparable prices for other grades. The support level theretofore had been 34½ cents.

EGGS: Record

Farmers continue to set new high records in the production of eggs. Total output this month reaches the peak for 1942—a higher peak than ever before. The number of layers on farms this winter was the largest since the late 1920's, the rate of lay was the largest on record. Farm production of eggs in February alone was 15 percent larger than during the same month last year. This was at a rate slightly higher than the egg production goals for 1942.

Apart from the imperative need to increase the production of eggs to meet extraordinary wartime demands, farmers have had good incentive in the price relationships of feed and eggs to produce more eggs this year than last. National average of prices received by farmers for eggs in mid-March was 57 percent higher than at

the same time last year, feed costs were up about 37 percent. Fewer eggs were required to buy feed this March than last.

There were considerably more layers in farm flocks this winter than last, and production per 100 layers was larger. Total production of eggs was larger in practically every State, but the biggest increases were in the North Central States where the weather was unusually mild. About half of all the eggs produced in the United States are laid in the North Central States. Hatchery production of more than 95 million baby chicks in February was a new high record for that month. Advance orders on March 1 were 45 percent larger than on the same date last year. Producers will probably raise 6 to 10 percent more chickens and turkeys this year than last.

SOYBEANS: Loans

A loan and purchase program on 1942 soybeans has been announced by the Department of Agriculture to implement its support of prices at \$1.60 per bushel for yellow soybeans of high-oil content varieties. Loans will be made on farm-stored soybeans, or purchases will be made of soybeans stored in approved warehouses or delivered to designated points.

Base rates at which soybeans will be bought from producers will vary according to class, grade, and quality. Rates for classes I and II (green and yellow) will be \$1.60 per bushel for high-oil content and \$1.50 per bushel for medium-oil content. Rates for classes III, IV, and V (brown, black, and mixed) will be \$1.50 per bushel for high-oil content, and \$1.40 per bushel for low-oil content.

To be eligible for purchase, the soybeans must grade No. 4 or better, must have been produced in compliance with the AAA program, must be owned by the producer, and must not be classed as weevily, musty, sour, heating, or as having any objectionable odor. Grades below No. 2 will be bought on the basis of discounts

generally recognized by the trade. Purchases will be made through June 30, 1943.

Official grain standards of the United States for soybeans will be used in determining the classification for the base rate.

FEED: Strong Demand

Livestock on farms drew heavily on the Nation's feed supply this winter. This was reflected in higher prices for feed of all kinds. Livestock specialists look for a continuing strong demand for feed throughout 1942. The carry-over of feed will be smaller this year than last but much larger than average. Bigger acreages of feed grains will be planted this season but it is unlikely that yields will equal the high records of 1941. If yields are good the supply of feed next winter should be ample for the increased numbers of livestock on farms at that time. Supplies of byproduct feeds next winter will probably be the largest on record.

CATTLE: Increase

Cattle numbers increased about 3 million head during 1941, raising the total of cattle and calves on farms and ranches as of January 1 last to slightly more than the peak number reached in early 1934. Government livestock specialists say that with cattle numbers now the largest on record, marketings for slaughter can increase considerably during 1942 even if numbers increase further this year. Prices of well-finished slaughter cattle improved near winter's end, and a further advance was expected in subsequent weeks.

Despite the increase in the national total, there are many areas of the West where the number of cattle is still considerably below the pre-drought 1934 figures. Barring the recurrence of drought conditions, the tendency to hold back breeding stock may continue for a year or so longer in these areas. In contrast, it is

believed that many farmers in the eastern half of the United States already have about as many cattle as they care to handle.

HOGS: Ceilings

Maximum prices for pork, established by the Office of Price Administration, went into effect on March 23 for a 60-day period. The ceilings on prices of the major pork products are the highest wholesale prices prevailing during the 5 days March 3-7. Hog prices in early March were as high as the peak prices reached in August 1937, and except for that period were the highest since 1926.

Government livestock specialists expect that the seasonal increase in hog marketings this summer will be more pronounced than usual. The total number of hogs on farms at the beginning of 1942 was 60.5 million head, or 12 percent more than on that date last year. On the basis of this and other information, it is expected that 51 to 52 million head of hogs will be slaughtered under Federal inspection during the 1941-42 marketing year (October-September), compared with 48 million head in 1940-41.

EARLY LAMBS: Fewer

Slaughter supplies of sheep and lambs will probably be smaller during late spring and early summer this year than last. The number of lambs remaining on feed in several important feeding areas was substantially larger at the end of February this year than last, but most of these lambs will have been marketed by May. In contrast, the early lamb crop is a little smaller this year than last, and the number of spring lambs marketed before July 1 probably will be smaller than during the same period a year ago. Weather and feed conditions have not been as favorable during the early lambing season this year as last. Last year, these conditions were unusually good.

WOOL: New Clip

The 1942 wool clip will probably be the largest on record for this country. The number of sheep on farms and ranches was 3 percent larger at the beginning of this year than last; an equivalent increase in the clip would mean a total production of about 470 million pounds (greasy shorn and pulled basis) this year, as contrasted with 455 million pounds in 1941. In mid-March the new clip was being contracted in Western States at prices about 5 cents a pound higher than at the same time in 1941. Prices were the highest in 14 years.

A uniform scale of maximum prices, clean basis, by grades for greasy shorn domestic wools, was put into effect by the Government on February 28. The schedule does not fix a maximum price to growers, but "clean" prices are those which correspond to an average price of 37.1 cents a pound for grease wool, the United States average local market price on December 15, 1941. This is the highest of the four prices below which maximum prices for wool cannot be established under the Price Control Act.

Production of wool in 12 Southern Hemisphere countries in the 1941-42 season has been estimated at 2.35 billion pounds, compared with the high record output of 2.36 billion pounds in each of the preceding two seasons. Most of the wool entering international trade is produced in these countries. With most European countries cut off by the war, the United States is now the principal outlet for South American wools.

MOHAIR: Increase

Production of mohair is likely to set a new high record this year, exceeding the 21.8 million pounds estimated for 1941. The 1941 clip was from 4.5 million goats and kids—more than ever before. Production is principally in seven States—Texas, New Mexico, Arizona, Oregon, Missouri, Utah, and

California. The clip yielded producers in these States a total of 12.4 million dollars of cash income last year, compared with 10.5 million dollars in 1940. The corresponding figure for 1939 was 8.9 million dollars.

HEMPSEED: Increase

Farmers are being asked by the Secretary of Agriculture this year to increase the production of hempseed by at least 33 times the 1941 production. Effort is to obtain a substantial domestic production of hemp fiber in 1943 so as to overcome shortages created by a stoppage of imports from the Philippines and Netherlands East Indies. The Commodity Credit Corporation is contracting to purchase at the price of \$8 per bushel of 44 pounds, cleaned basis, hempseed from the 1942 crop.

It is expected that about 350 thousand bushels of seed will be produced for planting for fiber production in 1943. The seed program will be centered in Kentucky, where conditions appear most favorable for gaining the production goals. Little, if any, additional equipment or machinery is needed for handling the 1942 seed program, it is stated.

(Fiber from the American hemp plant is the most satisfactory substitute for abaca, sisal, and hennequen, the three principal hard fibers used for rope and twine. Normally the United States obtains practically all of its abaca from the Philippines, and about one-half of its sisal from the Netherlands East Indies. The remainder of its sisal requirements comes largely from British East Africa.)

POTATOES: Support

A program to encourage growers to plant their full potato acreage allotments in 1942 has been announced by the Department of Agriculture. Prices will be supported by purchases for relief distribution by the Agricultural Marketing Administration and for distribution to low-income families

through the Stamp Plan; through diversion to starch, livestock feed, and other products under AMA programs, and by means of loans or purchases by the Commodity Credit Corporation.

Price support will be provided in each of the major producing areas, at scheduled base prices, for potatoes grading U. S. No. 1 or better, sacked, f. o. b., in carlots. Appropriate price adjustments will be made for marketable potatoes grading 85 percent U. S. No. 1 and for potatoes in bulk and in storage, if it proves necessary to handle bulk or stored potatoes.

The 1942 allotted acreage is regarded as being sufficient to produce the 365 million bushels of potatoes needed to meet normal domestic requirements. To encourage full planting, the regulations provide that producers must plant an acreage equal to at least 80 and not over 110 percent of their allotments in order to qualify for the full ACP potato payment.

The base prices range from \$1 per cwt. for Round Whites produced in Minnesota and North Dakota, to \$2.50 for Bliss Triumphs produced in Texas and Florida. Base for Green Mountains in Maine is \$1.25, and for Green Mountains in New York, \$1.45. Prices of potatoes were higher this winter than last, largely on account of smaller supplies and increased consumer income.

CITRUS FRUITS: Less

Production of citrus fruits is smaller this season than last. Largest decrease is in grapefruit, estimated in March at 41.5 million boxes, as compared with 43 million boxes in 1940-41. Total for oranges is slightly under 84 million boxes, compared with a little more than 84 million last year. The California lemon crop was indicated at 12.8 million boxes, compared with 17.1 million last year.

Commented the Crop Reporting Board: Citrus fruits suffered locally from high winds in Florida and from cold weather in California, but losses do not appear to have been serious ex-

cept for a reduction of 10 percent in prospects for lemons. The total orange and grapefruit crops are expected to be nearly equal to the large crops of last season.

STRAWBERRIES: Increase

Production of early strawberries has been indicated at 2.5 million crates this season, compared with less than 2.2 million in 1941. About 68 percent of the early strawberries will come from Louisiana. Acreage available for picking in the second early States has been indicated at less than 61,000 compared with a little under 63,000 last year.

APPLES: Holdings

Cold storage holdings of apples March 1 totaled 14.2 million bushels, compared with 17.1 million bushels on the same date last year. Included in this year's total were 1.3 million bushels owned by the Federal Surplus Commodities Corporation.

PEAS: Canning

Farmers' intentions reports indicate that about 487 thousand acres of green peas for processing will be planted this year, or about 26 percent more than in 1941. The 1942 goal for canned peas calls for a pack 32 percent larger than the 1941 pack. Possibility is that less than 372 thousand tons will be produced for canning and freezing in 1942, or only 7 percent more than in 1941. Last year the yield per acre was the largest since 1927.

LEND-LEASE: Deliveries

A total of more than 3.7 billion pounds of agricultural commodities was delivered to representatives of the United Nations for Lend-Lease shipment up to February 1. Total cost of these commodities, bought by the Agricultural Marketing Administration and delivered at shipping points since operations started last April, was about 417 million dollars.

Commodities included dairy products and eggs, meat, fish and fowl, fruits, vegetables and nuts, grain and cereal products, lard, fats and oils, other foodstuffs, and nonfoodstuffs. Deliveries of dairy products and eggs were valued at about 131 million dollars; meat, fish and fowl 106 million

dollars; lard, fats and oils 30 million dollars; fruits and vegetables 43 million dollars. A large proportion of the nonfood supplies—including cotton, tobacco and naval stores—was made available for lend-lease operations by the Commodity Credit Corporation.

FRANK GEORGE.

Eighty Hours—and More—on the Farms

NINE to four in reverse will be the farmer's schedule of work hours this year—from 4 in the morning until 9 at night—some 17 hours a day with little time out for meals. There is no reckoning of hours on the farms, there's a job to do and farmers are determined to do it. The Nation needs more food, the biggest quantity of food ever produced in this country. Farmers will produce that food if it is humanly possible to do so.

Government farm management specialists say that the machine power on farms is the greatest in our history, that the production efficiency of farm workers is vastly greater than it was in the days of World War I. But to produce all the food needed this year means hard work. Tractors will be running long after sundown and into the night pulling the implements of land preparation this spring, of cultivation this summer, of harvest this fall. Man and beast—work animals—will be pressed into service as never before.

The imperative need is for bigger production than ever before of oil crops—of peanuts, soybeans, flaxseed. The Nation needs a high record production of dairy products—evaporated milk, cheese, dry skim milk. Big supplies of feed are needed for the large numbers of stock on farms for a record production of milk, meat, and eggs. Cannery tomatoes and peas are wanted in unprecedented volume. Entirely apart from the requirements of a big civilian population, food in abundance is needed by our own and our allied fighting forces on all fronts.

How to get this big job done? For increased efficiency in the use of man and machine power here are some suggestions by two farm management specialists of the Bureau of Agricultural Economics.—Ed.

MOST effective use of labor and equipment has always been one of the toughest problems on the farm. Today both labor and new equipment are less plentiful and must be used still more thriftily if farm production programs are to be fulfilled this year.

In World War I farmers plowed up the virgin soil. They used teams in relays to accomplish more work per

day. It isn't necessary to break the virgin soil this time—there really isn't much more land to break—but farmers can make longer daily use of tractor drawn implements. Animal power once again will make a major contribution to a war effort.

Experience indicates that cooperative ownership of farm implements may be particularly useful among low-

income farmers having medium to small-sized farms. (There were about 6,400 FSA sponsored cooperative machinery services in operation on December 31, 1940. These FSA machinery cooperatives owned nearly 9,500 different pieces of machinery and equipment. Although tractors, plows, and mowers were among the more important pieces of equipment, a wide variety of machinery such as rakes, combines, ensilage cutters, harrows, cultivators, weeders, ditchers, and seeding equipment was included. It is estimated that more than 74,300 farmers used this machinery in 1940, an average of about eight users for each machine.)

CUSTOM work or "hiring out" has long been common for harvesting operations such as combining, threshing, ensilage cutting and the like. It has not been particularly common for other farm operations, but it might well be, especially in operations such as plowing and disking. Both custom work and cooperative ownership allow greater use of many machines adapted to only one operation such as threshing, peanut picking, and hay baling. Machines mounted on rubber are easily moved from job to job and are especially useful in meeting local needs and in extending seasonal use.

Good neighborliness in the exchange of work is a means of making fullest utilization of machinery and labor. Hand labor may be exchanged for tractor plowing or combining, and plowing may be exchanged for harvesting. How many days of labor should be exchanged for a given amount of work by a small combine or some other machine? How much plowing should be done in exchange for harvesting? In areas where custom work is common, fair rates based on considerable experience have been established. For operations involving exchange work that are not common, local committees of farmers can probably suggest fair rates.

Neighbors working together often find that two-man jobs or, on larger farms, crew work can be handled by year-round labor, thus avoiding the need for seasonally hired labor; that by slight changes in dates of planting, cultivating or harvesting, sometimes facilitated by planting earlier or later maturing varieties, they can exchange more work.

A FARMER alone may prepare the land and plant the seed, but at harvest time, more days of labor are needed if extra acreages of crops have been put in. Where adequate harvesting equipment and harvest labor are not available, livestock may be used to harvest and convert part of the crop for market. This is a particularly feasible method of harvesting a portion of the corn crop. On many farms a considerable acreage of hay may be turned directly into beef and mutton production by pasturing—particularly in areas harvesting two or three hay crops.

In eastern areas where corn is produced for grain some farmers have corn harvesters, but on many farms the corn acreage for grain is limited by the acreage that can be cut, shocked, and husked by hand methods. Farmers have been asked to produce about 6 percent more food and fiber this year than was produced in 1941. With a limited labor supply this additional load presents a serious operating problem. This load can be lightened by husking from standing stalks, a practice which has been common in the West for many years, and one that can be adopted to advantage in the East. From standing stalks a man can pick an acre of corn in a day, whereas cutting and husking by hand methods, cribbing the corn and storing the fodder will require 3 days. Picking from standing stalks also allows a relatively long period in which to do the job. But if a farmer has other roughage for feed it is doubtful if the extra labor cost can be offset by the value of the stalks saved.

MANY farmers are optimistic in planning to use new machines to save labor or make work easier. But new machines will be scarce this year. Production of all farm machinery will be smaller this year than last, and no greater supply of new machinery can be expected in 1943. Rubber-tired tractors will not be produced at all after May 1 this year, and many other pieces of equipment will be produced in smaller quantities. This will permit the use of materials for the manufacturing of badly needed milking machines, peanut pickers, pick-up balers, and other vital implements.

Farm mechanization has increased materially in recent years. It is estimated that production per worker now averages about 30 percent more than during World War I. We have a large proportion of relatively new machines on hand. For example, over 60 percent of our tractors are less than 5 years old. Add to this the fact that repair parts are being produced at 150 percent of the 1940 level and it appears that we will be able to maintain present inventories for the immediate future.

One way of relieving the pressure on the available supply of farm machinery is to dig over the farm junk pile. Probably most of this junk should make its way off the farm and into vital war production, but many discarded parts can be used to advantage to fix up pieces of farm machinery requiring repairs. In the present emergency, used farm machinery parts may be used to relieve the shortage.

SOME farm machinery not in use may be put into the hands of people who need it. In the past few years, much tractor-drawn equipment has replaced horse-drawn implements. Much of this horse-drawn equipment and some outmoded machines are still on farms. If they are sold and moved now to areas where they will be put into use, the pressure for new machin-

ARE FARM WAGES TOO HIGH?

Farm wages are rising—as they always do in time of extraordinary agricultural and nonagricultural production, of rising prices, and increasing competition for labor. Agricultural economists tell us that to date in World War II the rise in farm wages has been “in fairly normal relationship to the factors bearing upon wages,” but that by 1943 farm wage rates may become “relatively high.”

Even in this year 1942 there may be instances—especially in areas of new or increased industrial production—where the higher wages of farm workers will cut into rising farm income. And by 1943, the economists say, this situation may become fairly general—that farm wages will take a still larger part of increased farm income.

We make out of all this that farm wages may rise relatively more than the income of farm operators a year hence; in short, that farm operators will then be sharing with hired farm workers a larger part of their increased cash income. But that despite the increased wages the net income of farm operators will be larger in 1943 than in 1942.—Ed.

ery and parts may be relieved to some extent. Farmers who keep their equipment in tip-top condition and who get maximum service from it, are helping themselves and rendering a service to all of our people.

Farm boys and other skilled farm laborers going into the armed service or other employment will be replaced by less experienced farm help. With less efficient help, greater wear and tear of farm machinery should be expected. This emphasizes the need

for keeping farm machinery in good condition.

By continuous effort, machines probably can be kept in working condition, but there is still the problem of maximum use. Farm equipment can be worked more hours per day and more days a year. (A recent study shows that general-purpose tractors are used an average of about 50 days a year. At this rate of use, depreciation and interest on the investment constitute about 50 percent of the total cost of operation. During the time the tractor is not used, depreciation and interest charges go on just the same. Tractors as well as other items of farm machinery cost less per day of use if worked more days in the year. If tractors were used twice as much as they are at present, the cost per day would be about one-fifth less. On small farms the opportunity for

custom work may be one means of using tractors more economically.)

MANY of the practices suggested are being used now by farmers and groups of farmers. With the resulting efficiencies in labor and machine use, few year-round shortages are likely. However, it is still probable that acute shortages of labor and machinery may develop at harvest time in areas where production is being greatly increased or where defense employment has depleted labor supplies. In these situations, plans for remedying the shortage must be made before the crisis occurs. Farmers foreseeing such shortages should report them immediately to their War Boards so that precautionary steps may be taken.

R. S. WASHBURN.
R. C. TETRO.

Tomatoes for War

THE tomato, once an obscure plant, is now the most valued commercial truck crop produced in the United States. It is especially valued this year for its food content for our fighting forces on all fronts. The Federal Government has set up a production goal of 40 million cases of canned tomatoes for 1942, as compared with little more than 31 million cases produced in 1941. In addition, considerable quantities of tomato juice, soup and other products will be produced. Ordinarily about 40 percent of the processing crop is utilized for canned tomatoes, 15 percent for juice and 5 percent for pulp, the remaining 40 percent being used for soup, catsup, paste and numerous other products. Farmers will try to produce all the processing tomatoes needed this year, but difficulties may be experienced in getting the tomatoes picked and then canned.

The Department of Agriculture has

announced that it will buy from certified canners all quantities of 1942 canned tomatoes offered to it through December 31, 1942 at 95 cents per dozen No. 2 cans, f. o. b. cannery, for U. S. Grade C. To obtain certification, canners must be approved by U. S. D. A. State War Boards as having agreed by contract to pay growers at least the minimum price applying to their particular locality. The present program does not provide for tomatoes not grown under contract.

ALTHOUGH tomatoes for processing are grown in more than 36 States, 8 States grow about four-fifths of the crop. Leading producing States are California (614,200 tons in 1941), Indiana (564,000 tons), Maryland (279,500 tons), New Jersey (265,700), Ohio (213,800), New York (167,200), Pennsylvania (150,400), Virginia (91,600). States growing lesser quantities include Illinois, Michigan, Iowa, Mis-

souri, Delaware, Kentucky, Tennessee, Arkansas, Colorado, and Utah. Production has increased in practically all States except Kentucky, Missouri, and Delaware during the last 20 years.

Besides the 620 thousand acres of processing tomatoes that will need to be planted to meet the production goal, about 300 thousand acres of tomatoes will be grown for the fresh market. Tomatoes for fresh market are produced in almost all parts of the United States. Leading producing States are California (5 million bushels in 1941), Texas (3.2 million bushels), Florida (2.8 million bushels), New York (2.6 million bushels), New Jersey (2.1 million bushels), Maryland (1.2 million bushels). Other important States producing for the fresh market include Georgia, Louisiana, Mississippi, Colorado, Indiana, Michigan, Pennsylvania, Arkansas, Illinois, Missouri, North Carolina, Ohio, Tennessee, and Virginia. Total production for fresh market has more than doubled in the last 20 years. Improved transportation facilities have made possible the winter shipment of fresh tomatoes from the South and California to the large northern markets. Consequently, production increases have been greatest in these areas.

TOMATOES in both fresh and canned form are important in the dietary of our fighting forces but canned tomatoes are used more than fresh tomatoes. The army garrison ration prescribes 2 ounces of canned tomatoes per soldier per day, or 45 pounds per year. No direct allowance is made for fresh tomatoes, although these may be substituted for canned at the rate of 4 ounces of fresh tomatoes per soldier per day for each 2 ounces of canned tomatoes. Average yearly per capita consumption in the United States is about 9 pounds of canned whole tomatoes, tomato juice, and pulp. Consumption of fresh tomatoes for the urban population is about 17 pounds per capita.

Canned tomatoes also figure importantly in the food requirements of our Allies; substantial quantities are required for lend-lease shipments abroad. As a source of pure water and vitamin C, and as a food easily prepared and blendable with other foods, canned tomatoes are invaluable for use in bombed areas, in the trenches, and on shipboard.

WILLIAM KLING.

Soybeans for Oil in 1942

(As this issue of THE AGRICULTURAL SITUATION goes to press, information is received that although "there are millions of bushels of soybeans in storage on the farms and elsewhere, a number of mills are closed down for want of beans to crush. If this condition continues, the industry will experience its first carry-over—this in the face of the biggest coming crop in American soybean history. Facilities are adequate for crushing the 1941 crop, but it is reported that beans are being held for better prices, and mills complain that margins are too narrow for profitable operation. In addition, when warm weather comes many soybeans now in storage may deteriorate

rapidly, because the beans were not in good condition when they went into storage last fall."—Ed.)

THE American produced soy bean is playing its first major role in a United States war effort. For the first time its full value for food, direct defense, and commercial uses are being recognized. In this country soybeans produced for oil were of little importance during World War I; indeed, the quantity of oil produced was not enough at that time to warrant the gathering of production data. In 1924, the first year for which accurate figures are available, this country raised

1,782,000 acres of soybeans, the bulk of them in the South where soybeans have long been a major hay crop. Less than 5,000,000 bushels were harvested for seed, feed, and for crushing purposes; the quantity crushed produced 2,686,000 pounds of oil.

Soybean oil production increased steadily, but not rapidly during the next 10 years and totaled only 26,196,000 pounds. Since 1933 the expansion of soybean oil production has been phenomenal. During the current season (1941-42) it is estimated that 5,855,000 acres of soybeans were harvested for beans, with a production of 106,712,000 bushels. About 77 percent of this quantity will be crushed to produce approximately 736,000,000 pounds of soybean oil.

Production goals set up by the Department of Agriculture on September 15, 1941 called for an increase to 7,000,000 acres of harvested soybeans in 1942. After Pearl Harbor these goals were revised upward to 9,000,000 acres, with an estimated production of 1,125,000,000 pounds of oil. In addition to the oil produced, it is expected that large quantities of high-protein meal will be obtained as an effective aid in expanding livestock and dairy production and also for use as human food.

A LARGE part of the annual soybean crop crushed for oil is grown in the Middle West; the proportion this year will probably reach 90 percent. Production centers in Illinois, with an estimated one-half or more of the beans to be crushed. Iowa, Indiana, and Ohio also are important soybean producing States. North Carolina is the leading Southern producing State, followed by Arkansas, Mississippi, and Louisiana.

The Southern area will be looked to for expansion this year. While mill capacity is available for crushing the beans many Southern farmers will be handicapped because sufficient seed of varieties of high oil content adapted to Southern climatic and soil condi-

tions will not be available. In some instances less well adapted kinds must be substituted. Many Southern farmers also do not have suitable farm equipment for soybean production; and marketing facilities generally have not been sufficiently developed in the South.

The Middle West also will be looked to for big increases this year. But here, in contrast with the South, the climate, soil, cropping systems, and varieties are unusually favorable for expansion. Farmers in the Mid-west have had considerable experience in growing soybeans, and for the most part they have the needed equipment for increasing production. But they will need some additional storage and mill capacity.

Direct war needs for strategic and critical metals must be the criteria used in determining how additional soybean crushing capacity may be provided. Since the extremely urgent immediate need for military equipment is obvious, methods requiring little or no metal should be explored before new mills are constructed. The most effective use of metal in the over-all war effort must always be the deciding factor. With these limitations it has been suggested: (1) That every effort be made to obtain maximum volume and operating efficiency from existing plants; (2) that surplus soybeans be crushed on copra, flaxseed, or cottonseed oil mills which have unused capacity; (3) that existing mill capacity be expanded by adding new or used expeller or mechanical press equipment; (4) that new plants be built even though metals are scarce.—There are many pros and cons to each of these suggestions.

I

A determined effort to obtain maximum capacity from existing equipment should yield substantial results. Some equipment can be rebuilt and operations speeded up. The capacity of mills not now efficiently operated

and in poor repair can be greatly increased. Steps should be taken to see that mills have beans to crush at all times. The soybean processing industry has pledged itself to mutual assistance looking toward the handling of maximum volumes.

II

Soybeans may be shipped from surplus producing areas such as Iowa to existing copra, flaxseed, and cottonseed oil mills having unused capacity. This would make it possible to utilize existing facilities more fully, and would require little new construction. Fuller utilization of facilities would reduce per unit operating costs. Unfortunately most copra and cottonseed, and some flaxseed oil mills, have had little or no experience in crushing soybeans and are often not properly equipped to process or to store the beans; moreover, most cottonseed oil mills are equipped with hydraulic presses which ordinarily recover about 1 pound less oil from a bushel of soybeans than is obtained by expeller mills, and 3 pounds less than can be obtained when the solvent extraction method is used. In addition, the hauling of beans to cottonseed oil mills and the return haul to consuming areas of a large part of the meal and oil, would further tax already overburdened transportation facilities. In an emergency, however, these mills could be used to handle a large volume of soybeans.

III

The expansion of mills now using the expeller or mechanical press has its desirable features. The addition of one modern expeller press will increase the annual crushing capacity of a mill by about 200,000 bushels. A number of these presses could be added to the existing facilities of many companies without requiring additional building construction or supplementary equipment such as dryers and conveyers. The manufacture of new expeller equipment is, however, greatly re-

stricted at this time because of shortages of certain alloy metals now needed in direct war efforts.

As an alternative to adding new machinery, some used expeller or mechanical press equipment which may now be idle in the copra and cottonseed mills could be moved to soybean mills in midwestern areas where crushing capacity is inadequate. Each expeller thus moved would obviate the necessity of transporting around 200,000 bushels of soybeans to mills in other areas and the return haul of a large part of the soybean meal and oil to consuming markets. However, the moving of such equipment from existing mills would present numerous difficulties, including the use of metals in the reworking and adapting of such equipment to the handling of soybeans. The compensation of mills releasing a portion or all of their facilities would also be a problem.

IV

If other measures seem inadequate, a limited quantity of scarce material could be used for new plant construction. Should new mills be constructed this year or next, processors are quite generally agreed that the mills should be of the solvent extraction type. In this process the oil is recovered from the soybean by use of hexane, a highly volatile chemical solvent. By use of the solvent process roughly 11 pounds of oil can be obtained from the average bushel of high quality midwestern soybeans compared with 9 pounds for the expeller or mechanical press and 8 pounds for the hydraulic press. Although more metal is needed to construct a solvent extraction mill than the other type mills, the metals used are largely nonalloy, which are now relatively less scarce and require less machine tool work.

NUMEROUS and complex factors in the over-all war picture will govern decisions as to whether metals can be allocated for the construction of additional processing plants to

produce the vegetable oils needed for certain military and for civilian uses. If metal cannot be spared for the construction of new plants, it will be necessary to handle the maximum volume of beans with the use of existing facilities with the least possible metal consumption for repairs and adjustments. If some additional expansion is considered desirable every pound of metal for new construction will be used in such a way as to provide a maximum output of oil. In any

event all possible facilities which can be provided under the present emergency will be enlisted to assist in processing the 1942-43 soybean crop. With base prices which farmers will receive for soybeans already established at \$1.60 per bushel for high-oil content varieties the production of 9,000,000 acres of soybeans during the 1942-43 season can be assured.

OMER W. HERRMANN,
Farm Credit Administration.

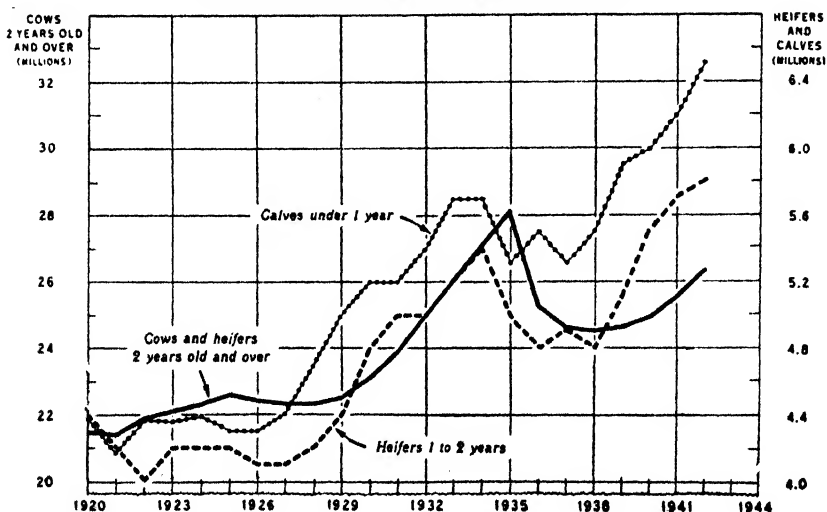
More Cows on Farms

LOOK for a further increase in the number of milk cows on farms this year and next, say Government dairy specialists, pointing to the trends on heifers and calves in the accompanying chart. Droughts and a shortage of feed played havoc with the dairy industry during the years 1934 to 1937, but for nearly 5 years now the dairymen have been saving large numbers of heifers, and the number of milk cows has increased sharply. There are enough cows on farms now to yield an increase of 3 percent in the production of milk this year over last,

but the production goals for 1942 call for an increase of 8 percent in milk production. To reach these goals will require unusually good pasturage this spring, and supplemental feeding this summer.

Agricultural economists say that the cow herds have been expanded because of the unusually high prices of milk cows in relation to the general level of prices of farm products since 1930, and more recently because of the unusually high prices of milk and dairy products. They expect a further expansion in cow herds during the next few years;

NUMBER OF COWS, HEIFERS, AND CALVES BEING KEPT FOR MILK
COWS, UNITED STATES, JAN. 1, 1920-42

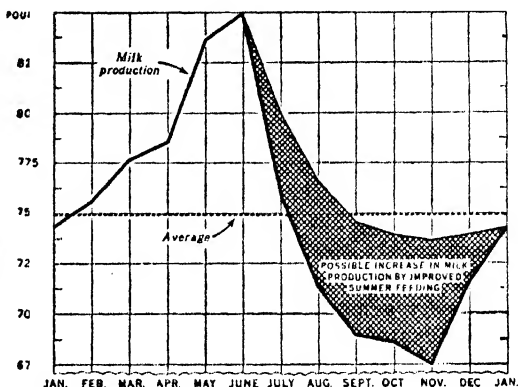


indeed, it is pointed out that the number of milk cows during this period will probably increase somewhat faster proportionately than the number of people in this country. Milk cows

were priced at an average of \$71.67 a head in 1941, compared with \$61.03 in 1940. The 1941 figure was the highest in 11 years.—F. G.

That Summer Slump

THE United States needs billions of pounds more milk in 1942 than in 1941. But in the chief dairy regions of the country, there has always been a serious decline in the production of milk as the summer season advances. The peak of production comes in the Spring, shortly after the cows are turned out to pasture. After only a month or so, production starts to slump until the low is reached—sometime between October and December.



This slump can be lessened. Recent studies by the Department of Agriculture show that about half, and in some States more than half, of the summer and fall drop in milk production can be avoided by better feeding. The avoidable loss in production is shown in the shaded part of the accompanying graph.

The thing to do immediately, it appears as a result of the study, is to feed concentrates at a heavier rate than ever before. An additional 2 to 3 pounds fed each day will go a long way toward preventing the slump, bringing about a gradual change to the winter level of production. Given sufficient time, the dairy farmer can also meet the problem by providing more and better roughage.

ASSUME that some permanent pasture is to be used for the dairy herd. Most farms have land well adapted for pasture but not for cropping. Granted some permanent pasture, what are the specific adjustments in feeding and management practices

needed to beat that summer and fall slump?

One way is to provide pasturage for use after the flush season of permanent pasture has gone. In the North, this pasturage may be oats at first, followed by a pasturage of Sudan grass or millet or a mixture of the two. A third pasture may be provided later by the aftermath of the hay fields. Alfalfa and first-year sweetclover are also useful for this purpose. And then of course—the permanent pasture may be resorted to at times throughout the season when the growth permits.

The need for supplementing permanent pastures is not so acute in the South as in the North. This is because some of the South's best pasture plants—Bermuda grass, Dallis grass, and lespedeza, reach their flush season in the summer rather than in the spring.

Another way to maintain production is to increase the acreage of hay. The additional hay crop can then be put up as grass silage for summer feeding. The milking cows should be fed the grass silage regularly throughout

the season following the flush of permanent pastures.

THERE are advantages and disadvantages to this system of making silage from the hay crops ordinarily grown on the farm. The chief advantage is that no shortage of feed exists at any time. Another advantage is that special crops need not be raised, which means that a regular rotation of the crops found best for the particular soil and climate can be followed. Still another item on the credit side is that the cows are more comfortable in a shady lot than in a pasture during hot weather, and they are spared the labor of grazing.

On the debit side is the fact that silage for summer feeding is not so well adapted to small herds as to herds of medium-to-large size. To feed the silage to small herds fast enough to prevent its spoiling, the silo may have to be so small in diameter as to be impracticable. But the leading objection to this system of silage feeding is that labor is needed to put up and feed the silage, as well as to remove the manure. This is not as much of a disadvantage as it might seem. Harvesting the feed with modern machinery may pay bigger dividends than harvesting by grazing. Stated another way, cow labor may be more costly than man labor. Man can employ labor-saving devices, but cows must pay in feed for the effort they put forth to graze.

True, keeping cows in a barn or lot means more man hours are required to collect and haul the manure. But it also means that manure is used much more efficiently. On the one hand, much of the manure in the pasture is voided around the gates and in the shade of trees where it does little good. On the other hand, the manure from the barns or lots that is hauled to the field can be distributed evenly where it is most needed. This means better

crop yields, which would help pay for the extra labor involved.

WE CAN change feeding and management practices. We cannot change the weather. But it is possible to lessen the depressing effects of hot weather upon the cows. They can be put to pasture at night, or during the cooler part of the day. At all other times, they can be kept in a barn or shady lot. Every effort should be made to keep the barn cool. It should be built so that the doors, windows, and even the sides may be opened to the breezes.

This much is certain: That any method of feeding or management that will lessen the summer slump in milk production is likely to be more expensive than the steady use of permanent pastures only. But in view of the outlook for a favorable market for dairy products in the years ahead, improved feeding practices are almost sure to be more profitable now than they have been for some time. All dairy farmers should be advised that they can best serve their country by feeding their cows the last pound of grain on which they can still make a profit.

FARM POWER: Up

The farms this year will be equipped with more motive-power machines than ever before. January 1 total was 7.0 million units: 1.8 million farm tractors, 4.2 million farm automobiles, and 1.05 million motortrucks. At the beginning of World War I there were few power machines on the farms. Practically all of the power used for field work, and for farm transportation was supplied by about 26 million head of horses and mules. Prior to World War I the annual consumption of motor fuel by farmers was little more than 100 million gallons. In 1940, farmers used 30 times this quantity.

Ballots on Wheat Marketing Quotas

ON May 2 United States wheat growers for the second time will vote on a marketing quota system—this time on the 1942 crop. A year ago—on May 31, 1941—more than half a million wheat farmers participated in their first marketing quota referendum. They approved quotas for their 1941 crop by a favorable vote of 81 percent. A two-thirds majority is required for approval.

The 1942 quota was proclaimed by the Secretary of Agriculture last July, acting in accordance with the law which requires that wheat marketing quotas must be established for any marketing year in which it appears that the wheat supply will exceed a normal year's domestic consumption and exports by more than 35 percent. Our 1942 supply is far above this figure.

If two-thirds or more of the farmers voting in the May 2 referendum approve, wheat will continue this year to be marketed under quotas the same as cotton, tobacco, and edible peanuts. All farmers who have planted more than 15 acres of wheat or whose normal production of the acreage planted to wheat is 200 bushels or more will be eligible to vote.

THE quota program proclaimed for the 1942 crop is virtually the same as that in operation for the 1941 crop. The penalty for marketing excess wheat is set at 50 percent of the basic loan rate offered cooperators. An amendment provides that a farm's minimum wheat marketing quota is the normal production of the wheat acreage allotment. As a result, wheat stored to postpone penalty payments may be released free of penalty by the amount of (1) the normal production of the numbers of acres by which the farm acreage allotment is underseeded or (2) the amount by which the actual production of a subsequent

crop is less than the normal production of the farm acreage allotment.

Because of huge stocks of wheat on hand and the size of the new crop—expected to be virtually a two-year supply on July 1, 1942—wheat marketing quotas are more necessary than ever this year in order to coordinate most effectively the United States wheat industry with other aspects of the Food for Freedom Program. Unlike the situation in World War I we have plenty of wheat on hand for any conceivable immediate need. The drive for increased farm production this year is not to expand wheat production further but to expand the production of other commodities—such as dairy, poultry, and meat products, vegetables, and oil crops.

MARKETING quotas give strength to AAA acreage allotment and commodity loan programs, both of which are vital to a strong wartime wheat industry. According to law, loans cannot be made available in any marketing year in which quotas are voted down. Marketing quotas not only help secure orderly production but also insure orderly transportation and storage—both of which are paramount this year because so much depends on the efficient use of our entire economy in carrying on the war. Here are some of the ways in which quotas assist during wartime:

1. Quotas provide for an organization of supplies so that transportation systems will not be clogged.

2. They make possible more efficient use of storage facilities, now so valuable to the food program.

3. They aid in directing wise and efficient production, rather than dissipating it on things that are not needed at present.

4. They help maintain a strong wheat structure for production of wheat as it is needed and at fair prices.

5. They help maintain soil resources for continuing production of wheat.

6. They help alleviate the situation caused by virtually complete lack of export outlets.

7. They help divide the responsibility for adjustment among all wheat farmers equally, cooperatively and democratically.

SECRETARY OF AGRICULTURE Claude R. Wickard pointed out these same facts a short time ago when he announced the May 2 referendum date. He said:

American agriculture is embarking on the largest and most comprehensive food production program the world has ever seen. To obtain this production, our entire agricultural effort must be expanded in such a way that no waste of human labor, machines, and material will occur in needless production of farm goods that already exist in plentiful quantities. Wheat farmers through the Ever-Normal Granary have provided plentiful reserves. Without producing a bushel this year, we have enough on hand to supply all of our anticipated needs both at home and in foreign outlets well into 1943.

Raising excessive wheat wastes productive effort of farmers, disrupts transportation, and clogs storage facilities that are already filled to capacity. We must provide for orderly handling of our wheat reserves, and at the same time democratically divide the responsibility for this orderly handling among all the Nation's wheat farmers.

IN REVIEWING our domestic wheat situation, it must be emphasized again that we have enough wheat on hand to take care of all conceivable domestic needs. Forecasts for 1942 indicate that our wheat crop will exceed domestic consumption by nearly 150 million bushels—which will be added to our already tre-

mendous reserve. This would result in an estimated carry-over of 753 million bushels on July 1, 1943—a carry-over bigger than many annual harvests.

Export outlets of any quantity are not in sight; so the possibility of whitening our reserve through foreign trade is extremely limited. Even with a sudden end to the war and a restoration of normal shipping, an unforeseen eventuality, our reserves are big enough to fill all likely demands until later crops. Some wheat, of course, will be put to use in new Government diversion programs, being converted into alcohol or used as livestock feed. But this will make only a very small nick in the total supply.

We are not the only Western Hemisphere wheat-producing nation to face this tight situation. Canada and Argentina are in somewhat similar position, having much more wheat for sale than markets can accept.

IF WE should try to get by without wheat marketing quotas this year, one of the gravest dangers would be to our storage facilities. Available space will be even more limited than it was in 1941. We thought we had a big carry-over back in 1932—but the carry-over of about 630 million bushels on July 1, 1942, will be about 250 million bushels greater. This means that storage will have to be stretched to the limit to absorb this year's crop. Limited building supplies will prevent the construction of much additional terminal storage, but there is some possibility that farm storage can be expanded.

These figures give an idea of the "above average" size of our wheat stocks at present: On January 1, 1942, wheat stocks on farms were 93 percent higher than the 1935-40 average. Supplies in country mills and elevators were 207 million bushels on the same date, as compared with the 1935-40 average of around 100 million bushels. Terminals had 270 million bushels of wheat, which is 177 percent over the 1935-40 average. Merchant mill storage was 24 percent over average.

Storage was taxed to capacity in

handling a large 1941 crop and a carry-over of 385 million bushels. The problem will be much more difficult this year with the largest carry-over in history and indications of a crop of nearly 800 million bushels. I sincerely believe that the wheat market-

ing quota referendum gives farmers the best possible opportunity to continue as masters of their own wheat production and reserves.

FRED S. WALLACE, *Chief,*
Agricultural Adjustment Agency.

DEBT: Reduction

Federal land bank records indicate that many farmers are using their larger income this year to reduce their farm mortgage debt. Reports to the Farm Credit Administration also indicate that farmers generally are using more short-term production credit than in recent years. Besides retiring debts in full, many borrowers have swollen the "rainy day" fund by approximately 4 million dollars during the past year.

"This fund," explains A. G. Black, Governor of the FCA, "represents money sent to the banks to be held for application at some future date to the retirement of part of the loan or to pay interest. Some borrowers have deposited enough to take care of several instalments and thus have built up their feeling of security. The banks pay the borrowers the same rate of interest on these future payments as

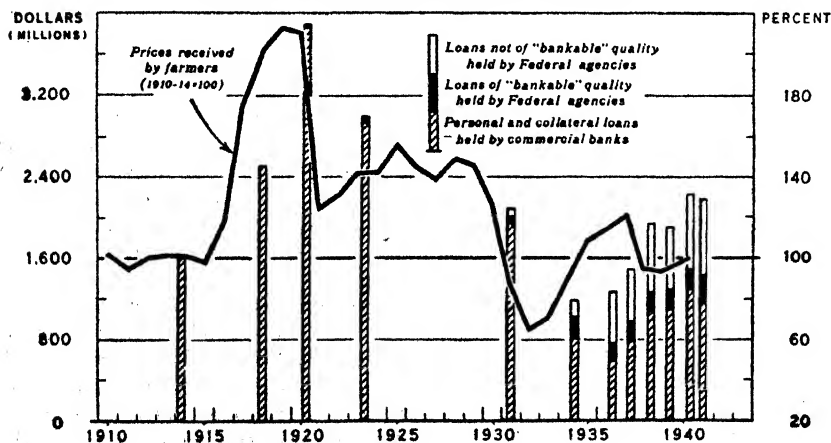
the borrowers pay the banks on their loans."

Of interest, too, is an FCA report that "farmers' repayments in 1941 on emergency crop and feed loans exceeded by some 4.8 million dollars the amount they borrowed." Many of the payments were on loans made 4 to 20 years ago. Emergency crop and feed loans—limited to \$400 per individual—are made only to those who cannot qualify for credit from such regular sources as production credit associations.

CROP INSURANCE: Wheat

Wheat production on 500 thousand farms—a new high record—has been insured for 1942 by the Federal Crop Insurance Corporation. This is the fourth consecutive year of increase. The farms insured in 1942 represent more than 30 percent of all wheat farms in the Nation.

SHORT-TERM LOANS TO FARMERS HELD BY COMMERCIAL BANKS
AND FEDERAL AGENCIES, AND INDEX NUMBERS OF
PRICES RECEIVED BY FARMERS, 1910-41



Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of industrial workers (1935-39 = 100) ²	Cost of living (1935-39 = 100) ³	Whole- sale prices of all com- modi- ties ⁴	1910-14=100			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in ⁶				
					Living	Production	Living and production		
1925	90	126	125	151	164	147	157	176	270
1926	96	131	126	146	162	146	155	179	271
1927	95	128	124	139	159	145	153	179	277
1928	99	127	123	141	160	148	155	179	279
1929	110	134	122	139	158	147	153	180	281
1930	91	110	119	126	148	140	145	167	277
1931	75	85	109	107	126	122	124	130	254
1932	58	59	98	95	108	107	107	96	220
1933	69	61	92	96	109	108	109	85	188
1934	75	76	96	109	122	125	123	95	178
1935	87	87	98	117	124	126	125	103	180
1936	103	100	99	118	122	126	124	111	181
1937	113	117	103	126	128	135	130	126	166
1938	89	91	101	115	122	124	122	125	183
1939	108	105	99	113	120	122	121	123	186
1940	123	119	100	115	121	124	123	126	183
1941	156	163	105	127	133	133	133	147	---
1941—March	147	141	101	119	124	125	124	---	---
April	144	142	102	121	---	---	124	138	---
May	154	157	103	124	---	---	125	---	---
June	159	167	105	127	129	128	128	---	---
July	160	173	105	130	---	---	130	160	---
August	160	174	106	132	---	---	133	---	---
September	161	177	108	134	136	135	136	---	---
October	163	178	109	135	---	---	139	165	---
November	166	180	110	135	---	---	141	---	---
December	167	187	110	137	143	141	142	---	---
1942—January	171	196	112	140	---	---	146	166	---
February	173	192	113	141	---	---	147	---	---
March ⁷	---	---	---	142	---	---	148	167	---

Year and month	Index of prices received by farmers (August 1909-July 1914 = 100)								Ratio prices received to prices paid
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	140	153	163	156	99
1926	131	122	138	143	147	152	156	145	94
1927	128	128	144	121	140	155	144	139	91
1928	130	152	176	151	159	151	153	149	96
1929	120	144	141	149	156	157	162	140	95
1930	100	102	162	140	133	137	126	126	87
1931	63	63	98	117	92	108	100	87	71
1932	44	47	82	102	63	83	82	65	61
1933	62	64	74	105	60	82	75	70	64
1934	93	69	100	103	68	95	89	90	73
1935	103	101	91	126	116	108	117	108	86
1936	106	100	100	111	121	119	115	114	92
1937	126	95	122	123	132	124	111	121	93
1938	74	70	73	101	114	109	108	95	78
1939	72	73	77	105	110	104	94	93	77
1940	85	81	70	114	108	113	96	98	80
1941	96	113	92	145	146	131	122	122	92
1941—March	84	82	83	145	129	118	90	103	83
April	90	88	89	161	137	121	104	110	89
May	93	98	89	146	138	124	107	112	96
June	106	107	97	146	144	126	118	118	92
July	98	121	93	130	154	132	127	125	97
August	99	128	100	133	158	135	130	131	98
September	106	150	89	145	166	140	141	139	102
October	101	144	107	164	157	145	146	139	100
November	103	136	98	147	151	148	157	135	96
December	112	138	98	162	160	148	153	143	101
1942—January	119	143	102	204	166	148	147	149	102
February	121	150	98	161	175	147	135	145	99
March	122	151	111	136	182	144	130	146	99

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Adjusted for seasonal variation. Revised November 1941.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926 = 100, divided by its 1910-14 average of 68.5.

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes.

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-13, payable mostly within the period Aug. 1, 1909-July 31, 1914.

⁷ Preliminary.

Note.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume output, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

WAR AGAINST INFLATION

THE

AGRICULTURAL

SITUATION

MAY 1942

A Brief Summary of Economic Conditions

Issued Monthly by the Bureau of Agricultural Economics, United States Department of Agriculture

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GOVERNMENT ACTION has been taken to stop the spiraling rise in the cost of living. Ceilings have been put on prices at levels prevailing in March, when the cost of living was 113 percent of the 1935-39 average. Exceptions include practically all nonprocessed farm commodities and some processed commodities such as butter, cheese, dressed poultry, flour, mutton and lamb. * * * Action was taken to protect national welfare from the hazards of spiraling living costs during a period when all energy is needed in a united front against aggression. Since the outbreak of World War II, prices of raw materials have gone up 66 percent, wholesale prices 31 percent, retail prices 25 percent. Farm prices have gone up 66 percent on average, and for several months the ratio of prices received to prices paid by farmers has been at parity. * * * Farmers this spring have been breaking all former records in the production of milk, meats, and eggs. They have put in record acreages of oil crops and other protective foods. Full steam is up in the war against aggression, full power the Nation over to produce the greatest volume of agricultural and military supplies by any people in any war.

WASHINGTON, D. C.,
April 27, 1942.

WAR ON INFLATION was declared today by the United States Government. The President said in a 7-point program:

* * * each one of these points is dependent on the other if the whole program is to work * * *. The only effective course of action is a simultaneous attack on all of the factors which increase the cost of living, in one comprehensive, all embracing program covering prices, profits, wages, taxes and debts.

Purpose of the program is to stop the upward spiralling of prices against the common interests of producers, processors, distributors, and consumers in this period of war crisis. Appeal was made to all of the people to join hands in the fight against economic and physical aggression.

SEVEN-POINT PROGRAM

1. We must, through heavier taxes, keep personal and corporate profits at a low, reasonable rate.
2. We must fix ceilings on prices and rents.
3. We must stabilize wages.
4. We must stabilize farm prices.
5. We must put more billions into War Bonds.
6. We must ration all essential commodities which are scarce.
7. We must discourage installment buying, and encourage paying off debts and mortgages.

—PRESIDENT ROOSEVELT on *Price Control*, Fireside Chat, April 28, 1942.

Commodity Reviews

SPRING WORK: Delayed

FARMERS were behind with spring work over most of the country in April—delayed by adverse weather. The Crop Board said that many farmers were reporting difficulty in getting competent help, and that some farmers were being handicapped by lack of production supplies. But moisture conditions were reported as being "better than usual" this spring, and prospects for early pastures "the best in recent years."

The Crop Board said: "Livestock numbers, exclusive of work stock, are above predrought peaks and still increasing, feed reserves are large, stocks of grain on farms are the largest on record for this season of the year, pastures and range prospects are promising, and the production of meat, lard, milk, and eggs is currently running at levels that provide fully the usual per

capita supply in addition to the present volume of Lend-Lease purchases.

"Unless offset by increased use of farm machinery, the shortages of competent labor now restricting the expansion of farming operations near industrial sections may affect more of the agricultural areas later in the year or next year. The decrease in manpower is resulting in some consolidation of farms, more efficient use of equipment, longer working hours and the adoption of short-cut methods to save labor—but the trend is still toward new high records of production."

FERTILIZER: Margins

OPA has restricted dealers' handling charges on nitrate of soda, sulphate of ammonia, and cyanimide following investigations which revealed markedly higher retail prices this spring than last as compared with increases in base

prices charged by producers and importers.

Maximum margins for cash sales of these fertilizers, direct or through agents to consumers, were established at \$4 per ton; maximum margins of mixers for cash sales to dealers at \$2 per ton, and dealers' margin on cash sales to consumers at \$2 per ton. All transportation expenses and the cost of tax tags and attaching the tags—paid by the reseller—may be added to such margins, records of which must be kept by resellers.

These three fertilizers are sold chiefly in the southeastern United States, where they are used in growing cotton, sugar, corn, and vegetables. Little is sold elsewhere. Limited shipping facilities for importing South American nitrates, increased military requirements, and increased farmer demand have contributed to a scarcity in supplies this season.

PRICES: Parity

The long-standing gap between prices received and prices paid by farmers has been closed. To keep it

closed is a major objective of Government in an economic program designed to stabilize prices during this period of wartime emergency. Government economists forecast that the ratio of prices received to prices paid by farmers will continue at approximate

Index Numbers of Prices Received and Paid by Farmers

1910 = 100

Year and month	Prices received	Prices paid	Buying power of farm products ¹
1941			
April - - - - -	110	124	89
May - - - - -	112	125	90
June - - - - -	118	128	92
July - - - - -	125	130	96
August - - - - -	131	133	98
September - - -	130	136	102
October - - - -	139	139	100
November - - -	135	141	98
December - - -	143	142	101
1942			
January - - - -	149	146	102
February - - - -	145	147	99
March - - - - -	146	150	97
April - - - - -	150	151	99

¹ Ratio of prices received to prices paid

² Revised

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and States.]

Product	5 year average, August 1909-July 1914	April average 1910-14	April 1941	March 1942	April 1942	Parity price April 1942
Cotton, lb.	12.4	12.4	10.4 ²	18.06	19.03	18.72
Corn, bu.	64.2	63.4	62.0	78.4	79.7	96.9
Wheat, bu.	88.4	89.3	76.0	105.1	99.7	133.5
Hay, ton	11.87	12.16	8.10	11.03	11.13	17.02
Potatoes, bu.	69.7	68.8	157.4	103.9	116.2	107.0
Oats, bu.	39.9	40.9	35.2	51.9	51.8	60.2
Rice, lb.	81.3	-	112.6	168.6	178.1	122.8
Peanuts, lb.	4.8	5.0	3.62	6.03	6.25	7.25
Tobacco ³						
Fire-cured types, 21-24 lb.	10.6	-	8.4	12.9	11.2	12.9
Maryland types, 32 lb.	22.9	-	-	30.0	27.0	21.5
Air-cured, dark types, 35-37 lb.	11.2	-	-	11.8	-	10.5
Cigar filler types, 41-45 lb.	14.1	-	9.0	12.5	11.4	13.3
Cigar binder types, 51-55 lb.	10.9	-	11.3	16.8	15.6	18.7
Apples, bu.	96	1.18	1.06	1.30	1.11	1.46
Beef cattle, cwt. ¹	5.42	5.73	8.55	10.26	10.71	8.18
Hogs, cwt. ¹	7.27	7.71	8.16	12.52	13.48	10.98
Chickens, lb.	11.4	11.8	15.7	18.0	18.4	17.2
Eggs, doz.	21.5	16.6	19.7	25.8	25.6	26.6
Butterfat, lb.	26.3	25.9	32.6	35.7	37.0	39.5
Wool, lb.	18.3	18.0	31.5	38.3	39.2	27.6
Veal calves, cwt. ¹	6.75	6.80	9.86	12.14	12.22	10.19
Lambs, cwt. ¹	5.88	6.45	9.37	10.61	10.83	8.83

¹ Revised.

² Post-war base

³ Base price crop years 1910-20.

⁴ Adjusted for seasonality.

parity during the remainder of this year.

Farm income is rising seasonally, but less sharply than at this time last year. Largest gains are from the unusually heavy marketings of hogs at relatively high prices; income from other livestock and animal products also is larger than at this time last year. Livestock and animal products usually account for about two-thirds of all income from farm marketings during the June quarter.

The great volume of commodity-buying by the Department of Agriculture is of increasing importance to farmers. Following is the record of purchases during the year ended March 15, 1942. It includes quantities made available for Lend-Lease by the Commodity Credit Corporation, as well as purchases by the Agricultural Marketing Administration.

Commodity	Amount	Cost (f. o. b.)
	<i>Million pounds</i>	<i>Million dollars</i>
All farm commodities -----	7,602	810
All foods -----	6,850	672
Meat products -----	1,116	237
Lard -----	451	50
Pork -----	657	179
Other -----	8	8
Dairy products -----	1,521	164
Eggs -----	234	119
Vegetables -----	820	27
Fruit -----	1,180	44
Grain and products -----	1,430	32
All other foods -----	539	49
Nonfoods -----	752	138
Cotton, baled -----	357	58
Tobacco -----	213	68
Other nonfoods -----	182	12

FARM WAGES: Up

Farmers were hiring more help and paying higher wages this April 1 than last. More than 2,000,000 persons were on farm pay rolls compared with slightly less than that number a year ago; but there were fewer family workers on the farms, and total employment at 9,483,000 workers was 97,000 smaller than on April 1 last year. Wages were the highest in more than 12 years—177 percent of the 1910-14 average. Rates per month

without board ranged from less than \$30 in a few southeastern States to a high of \$97 in California.

BAE expects that slightly fewer persons will be employed on the farms this year than last, but that this will not prevent the attainment of the great volume of production sought in Food for Freedom goals. The dairy and poultry farms have been turning out record quantities of milk and eggs this spring, livestock slaughter has been larger than in 1941, carlot shipments of fruits and vegetables have been bigger. Bigger acreages of practically all crops have been planted.

MACHINERY: WPB

WPB has amended its farm equipment program so as to permit increased production of peanut pickers, potato planters, beet drills, beet lifters, steel plow shares, cylinder-type power corn shellers, harness hardware, and individual livestock drinking cups. The amendment enables manufacturers to produce 3,600 new peanut pickers this year. Pickers will be distributed to farmers through cooperative peanut associations in order to assure custom picking and other cooperative methods of harvesting.

MILK: Record Flow

Milk production continues to exceed former records, is expected to total more than 12 billion pounds this month, and more than 12.5 billion in June. Production has been running about 4 percent larger this year than last; at this increased rate the total output for 1942 would be about 120 billion pounds against 115.5 billion in 1941, and 105.2 billion average for 1936-40. Prices of dairy products in mid-April reflected the recent increase in the Government's buying price of butter and the less-than-usual seasonal declines in prices of most other dairy products.

Big question is whether price relationships will continue to induce

dairymen to increase milk production. BAE noted last month that despite the advance in prices of butter, butterfat was cheaper in comparison with hogs than in any other April since 1918. Hogs compete with cows in part of the Corn Belt, and the number of cows marketed appears to have increased. In February the total of all cows and heifers slaughtered under Federal inspection was the largest on record for that month.

Farm supplies of feed grain per unit of livestock are large. Prospects for pastures and for feed production this year were reported last month as being "outstandingly favorable."

EGGS: Increase

Production of eggs is on the seasonal downslide, but the output in coming months should be bigger than in the like period last year. At current and prospective prices it is profitable to convert feed into eggs. Besides good consumer demand, the market has been expanded greatly by Government buying of eggs. The Department of Agriculture is making contracts with egg driers for delivery through December 31.

BAE says that farmers apparently are going ahead with plans to increase the production of chickens and turkeys this year. Hatchery output of baby chicks was 25 percent larger this March than last, and the number of eggs set was 18 percent larger. Many more turkey poults were hatched this March than last. Expectation is that farmers will raise 6 to 10 percent more chickens and turkeys than in 1941.

Despite increased production, higher prices are forecast for chickens and turkeys.

FATS, OILS: Unchanged

Little change is expected in prices of fats and oils during the next few months. Basis is the OPA ceilings. Meanwhile, the extraordinary demand for fats and oils continues un-

abated, and farmers are being urged to increase the production of oil crops this year. In Canada, too, every effort is being made to increase the output of flaxseed. * * * Last year, the consumption of fats and oils in the United States totaled nearly 11 billion pounds; this year, the requirements are much larger.

Of the 11 billion pounds consumed last year, about 7 billion was utilized for food, and 4 billion for soap and other industrial products. Total in both categories was the largest on record. During the last 30 years the consumption of fats and oils has practically doubled. Per capita utilization increased from 53 pounds in 1912 to 82 pounds in 1941. Biggest percentage increases have been in industrial uses; smallest in the consumption of butter.

FEED: Supply

Feed crops will be a little smaller this year than last if yields of only average size are obtained on the acreages farmers reported in March they intended to plant this year. But the output of high-protein feeds will be considerably larger—about 15 percent larger in 1942-43—in view of increased acreage of soybeans, peanuts, cotton and flax. Meanwhile, it is indicated that the carryover of corn may be 15 to 20 percent smaller this October 1 than last when the total was 643 million bushels. Total supply of feed grains per animal unit in 1942-43 may be the smallest in several years.

CATTLE: Big Supply

Another big supply of cattle is in the feed lots. Total was only 2 percent smaller this April 1 than last when largest numbers in recent years were reported. Feeders reported that about 71 percent of the cattle had been on feed for more than 3 months, and indicated that the proportion to be marketed before July 1 is a little larger this year than last. Kansas, Minnesota, Missouri, Nebraska, and South

Dakota reported larger numbers of cattle on feed this April 1 than last; decreases were reported in Illinois, Indiana, Iowa, Michigan, Ohio, and Wisconsin.

Marketings of slaughter cattle during the first quarter of 1942 were about 20 percent larger than during the like period of 1941. Inspected slaughter for the first quarter this year was the largest on record, but it is unlikely that the same rate of increase over 1941 will be maintained throughout the year. It is practically certain, however, that total cattle slaughter will be substantially larger this year than last.

HOGS: Increase

Market movement of the large 1941 fall pig crop is now underway, and the supply of hogs during the next few months—through September—is expected to be about 15 percent larger than a year earlier. Meanwhile, packers operating under Federal inspection have been asked to offer for sale to the Department of Agriculture (for Lend-Lease) at least two-fifths of their pork production and two-thirds of their lard production during the next 3-6 months. Less pork and lard will be available for domestic consumption this summer than last, but supplies of other meats will be larger, and the total of all meats may be about the same as in 1941.

Hog prices in mid-April were the highest in 16 years, and the hog-corn price ratio the best since early autumn of 1938. Market reports in late April indicated that the favorable hog-corn price ratio and the narrowness of the spread between prices of light and heavy hogs were inducing farmers to feed pigs to relatively heavy weights. Storage stocks of both pork and lard were smaller this April 1 than last. Probability is that the 1942 pig crop will be the largest on record.

WHEAT: Problem

Big problem in winter wheat soon to be harvested is how to get the crop stored. Transport facilities already

are overburdened and grain storage space is at a premium. Many observers say that larger quantities will have to be kept on the farms this year even though most farm bins and granaries are already full; that additional farm storage facilities must be built. Farmers are urged to consult with USDA War Boards regarding storage needs.

April estimates indicated a winter wheat crop of 625 million bushels, but this does not include the big acreage of "volunteer" wheat that may be harvested this season. Add 164 million bushels of spring wheat. Add a carry-over of 631 million bushels. The total—1,420 million bushels—compares with 1,331 million bushels last year. Domestic disappearance is forecast at 675 million bushels, leaving 745 million for export and carry-over in 1943.

COTTON: Increase

Production of cotton goods—but increasingly for military use—continues to set new high records. Cotton mill consumption is expected to total about 11.5 million bales this current year ending on July 31 next, leaving a prospective carry-over of little more than 10 million bales for 1942-43. This is a little over a 10-months' supply at the current rate of consumption; moreover, much of it will be low grade, short staple cotton. About 60 percent of it will be of staples under 1 inch in length, and not more than 3 percent of staples $1\frac{1}{4}$ inch and longer.

Meanwhile, the South is well into a new production season, and hoping for good yields on a larger acreage this year than last. In mid-April the price of cotton was slightly above parity. Government also is offering good premiums for long staple cotton needed in bigger supply this year in the production of military goods. . . . Of interest in the current price situation is the narrowing of the spread between prices of cotton and the ceilings on cotton goods.

FLAXSEED: Loans

The following loan rates on flaxseed produced in 1942 have been announced by the Department of Agriculture: \$2.40 a bushel for No. 1 flaxseed delivered at Minneapolis, St. Paul, Duluth, Chicago, and Portland; \$2.45 at Los Angeles and San Francisco, and \$2.35 at Kansas City, Mo.

Loan values at local stations for flaxseed in storage on farms or in country warehouses will be determined on the basis of the terminal market rates less transportation and 4 cents per bushel handling costs. The average loan rate on flaxseed stored on farms will be at least \$2.20 per bushel. The discount for flaxseed grading No. 2 will be 5 cents per bushel. A deduction of 6 cents per bushel will be made unless evidence is submitted that freight has been paid and that freight bills have been registered for transit privileges.

No storage allowance is made for farm storage, and loans secured by warehouse receipts will be discounted 7 cents a bushel unless they carry an endorsement stating that storage charges have been paid through June 30, 1943. This deduction represents the estimated average of storage charges which the Commodity Credit Corporation would be required to pay if the producer failed to redeem his note. Loans will be made through January 31, 1943, and the notes will mature on demand or June 30, 1943.

Only flaxseed grading No. 2 or better will be eligible for loan. Seed containing more than 30 percent damage, or more than 11 percent moisture, or otherwise of low quality, is not eligible. Seed must have been produced in compliance with AAA regulations.

SUGAR: Increase

Sugar beet growers have indicated they will put in 983,000 acres this year compared with 795,000 in 1941—an increase of 24 percent. Principal limiting factors are factory capacity and the probable labor supply for

tending and harvesting the crop. Largest acreage of record was 1 million planted in 1933. Probability is that about 900,000 acres will be harvested this year compared with 757,000 in 1941. Production in 1941 totaled 10.3 million tons of sugar beets, yielding 1.6 million tons of sugar, raw value. Continental production of sugar from sugar cane—in addition—was 419,000 tons, raw value.

SHEARLINGS: Wanted

Uncle Sam wants shearlings. Shearlings are sheepskins with a little wool left on. They are needed for aviation suits. No. 1 shearling pelts (with wool length from $\frac{1}{2}$ to 1 inch) were recently quoted at \$2 each. No. 2's (with $\frac{1}{4}$ to $\frac{1}{2}$ inch of wool) were quoted at \$1.80. Pelts from ewes, yearlings, fed lambs, and spring lambs will qualify for these premium prices. Growers' part is to market slaughter sheep and lambs carrying at least $\frac{1}{4}$ inch of wool—preferably $\frac{1}{2}$ inch—this season.

TOBACCO: Big Supply

Tobacco will be in big supply this year as measured by pre-war averages. But domestic consumption of tobacco also is far above pre-war figures. Consumption during the year ending June 1942 has been tentatively estimated at 225 billion cigarettes compared with 190 billion the preceding year, and 6 billion cigars compared with 5.7 billion in 1941. The use of snuff is larger than in 1941. Chewing continues to increase but at a reduced rate.

Carryover of tobacco will be smaller this year than last, but Government acreage allotments have been raised, and growers probably will plant up to the limit of these allotments. Hardly to be expected is that they will do less, in view of last year's good level of prices. Yields per acre will spell the difference in supply figures for 1942-43. Last year the crop was unusually small.

SEEDS: Increase

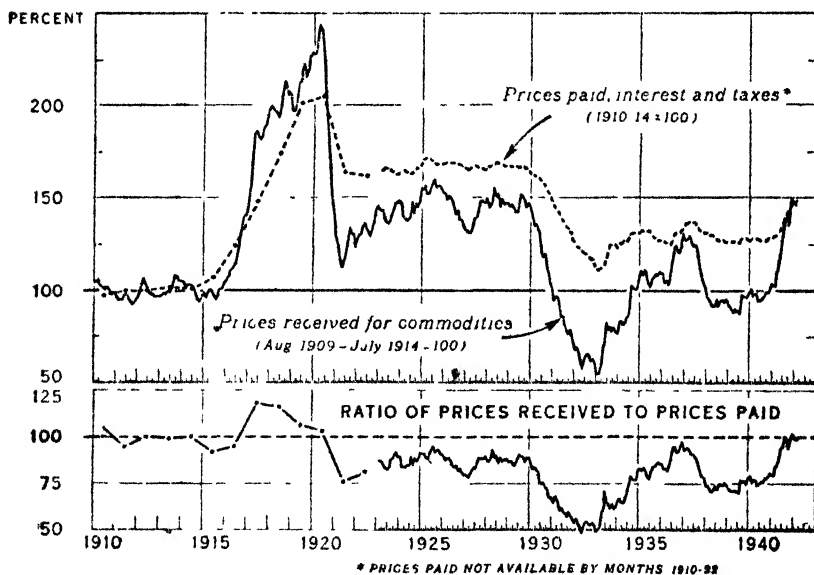
Commercial growers expect to harvest bigger crops of vegetable seeds this year than last. Only exceptions in a list of 50 seeds are collard, cress, eggplant, loose-leaf lettuce, okra, and smooth peas. Production of nearly two-thirds of the vegetable seeds in 1941 fell below expectations, while that of about one-third was better than expected. Much larger acreages are being put in this year, and the yields should be bigger than in 1941. Seed crops expected to show largest increases this year over last are kohlrabi, Chinese cabbage, chicory, leek, celery, cauliflower, kale, chard, mangelwurzel, rutabaga, and endive.

TRUCK CROPS: More

Crop reports in April indicated a 6 percent increase in acreage of vegetables grown for shipment this year. Some shift toward crops that were high in price last year was indicated—particularly cabbage and onions. There is good consumer demand for fresh vegetables, and prices compare favorably with those of last year. Most of the cannery crops will be in bigger supply this year, principally to meet the extraordinary Government requirements under Lend-Lease commitments . . . The total pack of canned fruits will probably be the same this season as last.

FRANK GEORGE.

PRICES RECEIVED AND PAID BY FARMERS. INDEX NUMBERS.
UNITED STATES. 1910-42



For 20 years prior to 1941 the average of prices received by farmers in the United States failed to reach parity (the relation to prices paid by farmers, including interest and taxes, which prevailed in 1910-14). The closest approach was in 1937 when decreased production of some commodities due to drought plus improved consumer demand carried prices to 98 percent of parity. From August 1941 through April 1942, prices averaged 99 percent of parity, and in 2 of these months were slightly above parity, reflecting increased consumer demand and Government purchases connected with the war.

War Foods and the Small Farmer

SECRETARY of Agriculture Claude R. Wickard, 7 days before the Department of Agriculture announced revised farm production goals, said:

Our greatest opportunity * * *
is to get increased agricultural
production from the small farms
of this country.

The Secretary's statement emphasized the need for top-capacity operation of the Nation's farm plant—by small as well as large producers. Records of 430,000 Farm Security rehabilitation borrowers show how diversification can be accomplished and essential food production upped when credit is combined with guidance. The average family which had been on the small loan program a year or more, produced \$327 worth of food and other goods for home use in 1941, compared with \$163 worth in the year before receiving FSA aid—an increase of 101 percent.

These families had canned an average of only 139 quarts of fruits and vegetables prior to FSA help. Last year they canned an average of 297 quarts—an increase of 114 percent. FSA borrowers in 1941 increased meat production for home use by 236 pounds—an increase of 94 percent—and milk production by 184 gallons, or 64 percent. In 1941, each family produced for home use an average of 131 dozen eggs and 10 gallons of lard, and stored 27 bushels of fruits and vegetables.

These increases in food production for home use meant better diets and better health for thousands of small American farm families. They meant that families who might be eating out of the Nation's larder were filling it instead. To grow food for freedom, FSA borrowers need only to increase production of the things they've been producing for themselves.

AFTER Food for Defense goals were announced in 1941, FSA borrowers were urged to increase live-stock, dairy and poultry production in areas where the products were most needed. In South Carolina, Georgia, Florida, and Alabama, each family revised its farm and home plan to include 50 more baby chicks, 1 more brood sow, 2 more milk cows.

Supplemental loans reached nearly every FSA borrower—some 54,000 families in the 4 States. By January 1942 these southern farmers reported they had raised some 5,000,000 chicks. They sold 2,250,000 cockerels to pay the original investment and feed bill. All pullets were kept for egg production, are now producing more than 500,000 eggs a day.

The farmers bought 20,000 brood sows, which would normally produce litters of 120,000 pigs a year. Their 20,000 additional cows are expected to produce \$1,000,000 worth of milk in 1942, in addition to baby beef and young milk stock.

PEARL HARBOR goals set the pace for new food production standards. FSA regional directors met on January 2 to outline Farm Security's war policy. Field procedures for financing food production were streamlined. Simplified farm plans centered upon essential foods. Farm supervision for Food for Freedom crops was given priority.

Three groups were singled out as most likely candidates for increased food production. Farm Security would make: (1) Substantial Food-for-Freedom loans to present and future standard rehabilitation borrowers for additional stock and crops; (2) smaller Food-for-Freedom loans to low-income farmers whose land resources were inadequate for regular loan eligibility, but sufficient for increased production of food, feed and

other needed war crops; (3) farm and home improvement loans to enable non-self-supporting families to improve their living conditions, to build up their soil or get more land necessary for participation in the war food program.

Loans up to \$150 would continue to be made to children of low-income families for seed and stock needed for vocational agriculture club projects.

BY February 1942, county FSA supervisors reported that Farm Security's part in the Department's Food-for-Freedom program was out of the blueprint stage. In many States, 1942 production was well under way. For example, FSA borrowers in South Dakota pledged to produce for 1942:

- 2, 899 acres of flax,
- 1, 438 acres soybeans,
- 56, 742 bushels potatoes,
- 998, 943 dozen eggs,
- 1, 768, 248 pounds butterfat,
- 8, 902, 636 pounds beef,
- 9, 114, 957 pounds pork,
- 403, 507 pounds chickens,
- 20, 700 bushels corn,
- 103, 452 bushels other grains,
- 943, 238 quarts canned, and 23,868 bushels stored, fruits and vegetables.

From Maine through Connecticut came production estimates from 6,000 more borrowers. Small New England farmers would bring 11,500 more cows into production in 1942, would add 853,600 pullets to their flocks, would fatten 15,000 pigs for market. If the growing season was favorable, gardens would produce an estimated \$518,150 worth of foodstuffs.

In Louisiana, small farmers on the Farm Security program worked out the following production schedule for their farms: (1) A garden large enough to furnish a continuous supply of fresh vegetables to meet each family's needs and a surplus to fill a budget of canned and dried vegetables; (2) at least 2 cows; (3) not less than 50 to 75 laying hens; (4) at least 1 sow; (5) 1 beef for home use; (6) enough sorghum or sugar cane to provide sirup

for home use with a surplus to sell; (7) a 25-percent increase in Irish potatoes in areas suited to production; (8) enough grain and roughage to obtain maximum production from all livestock on the farm.

MARCH reports from FSA's California office indicated that some 10,000 borrowers in California, Nevada, Utah, and Arizona, with the aid of loans totaling \$1,250,000 will increase their normal output sufficiently to give every soldier in an army of 7,000,000 men 4 additional eggs, a strip of ham or bacon, two 16-ounce cans of tomatoes, and 3 pounds of sugar. This, FSA borrowers said, was their concrete expression of patriotism and loyalty.

All over the country Food-for-Freedom stories were heard—some took on unusual twists but most were simple straight-from-the-heart accounts of what small farmers were doing to help Uncle Sam win the war.

In Suwannee County, Fla., a "Victory Pig" campaign was started. All 200 FSA borrowers in the county joined up, chose the shoat "most likely to succeed," nicknamed him "Vic" for Victory and planned to give him special care and feed. On a coming day this September or October, hundreds of "Vics" will be sold at auction; proceeds will go into war bonds and stamps.

Five thousand other southern borrowers have dedicated "An Acre for a Soldier." From now on, these farmers pledge to treat this acre as "My Soldier's Acre," to give it special care so that one soldier at the front will always be fed and warm.

But no farmer in America promised more patriotic production for 1942 than did a farm woman at Cedar Cove, Ala. "if the Lord gives me my helth to double my canning record, and raze 2 hogs for the boys in service and 1 for myself." She added: "I have Pearl Harbor rote down in my Hart."

JOSEPH STAHL,
Farm Security Administration.

Packaging the Nation's Food

ABOUT the middle of last year, we began to have the uncomfortable feeling that supplies of burlap and tin were going to be short. Our worst fears became a certainty almost before the echoes of the bombs that fell on Pearl Harbor had faded away. In successive steps large quantities of burlap and tin were earmarked for military use; ships that had been transporting these materials from the Far East were diverted to more urgent duties, and, as a last straw, many important producing areas fell into the hands of the Japanese.

To help cope with the emergency, the War Production Board put burlap under complete allocation control because of the uncertainty of future shipments from Calcutta, where almost 90 percent of the world's supply is manufactured. Now the Army, Navy, and Office of Civilian Defense have first call on burlap, and the use of whatever supplies are left has been restricted to bagging agricultural products.

A PROGRAM of voluntary conservation of supplies for agriculture has been launched, with farmers and distributors being urged to take better care of bags patching them when necessary—so that the bags will last longer. Bags are being returned to trade channels more quickly, thus making it possible for less burlap to do more work. Mills using wool are returning used burlap bags to wool growers, the number returned for reuse now totaling more than one-third the number critically needed for handling the new domestic wool clip. Processors of other products are cooperating in the same way.

Other materials are being sought to take the place of burlap, and suitable substitutes are being developed—cotton, for example. Short staple cotton can be used for bagging material and we have large quantities of that staple

The packaging of foods from farm to market, in processing, and in National and Lend-Lease distribution is an important part of the war effort. Bags, boxes, crates, cans, and other containers are needed in mountainous supply. Some packaging materials are scarce, must be used economically. New types of containers and new packaging techniques are being developed to help fill the gap * * * Altogether, assurance is that the high flow of food this year will not be checked for lack of packaging. The accompanying article highlights the current situation. —Ed.

on hand. A recent War Production Board order defines cotton fabrics suitable for bags and assigns an A 2 rating for the manufacture of such fabrics. Some cotton mills, formerly manufacturing finer materials, have switched to bag fabrics. And over 12,000 rug looms, idle through a scarcity of jute, will soon be turning out bagging material and duck.

Paper is receiving considerable attention from bag manufacturers. Products such as rice and beans can be marketed in solid paper containers treated chemically so as to be tough and moisture repellent. Commodities such as oranges and onions can be successfully marketed in mesh bags made of twisted paper strands. Additional materials undoubtedly will be used as substitutes as the burlap shortage becomes more acute.

AS FOR tin, a War Production Board order provides that enough tinplate for canning certain "primary" food products shall be made available. Primary products include specified fruits, fruit concentrates, and pectin;

some vegetables—principally those for which production goals have been established; tomato juice; a few kinds of fish and shell-fish; and miscellaneous foods—among them baby food formulas, evaporated milk, dry milk, special dietary products, and dehydrated vegetables.

Tinplate in quantities ranging from 25 percent of that required for the 1940 pack to 125 percent has been allocated for a long list of "secondary" foods. The quantity limits imposed on secondary products, however, relate only to the pack permitted for civilian consumption. If more of these foods are needed by the Army, Navy, Lend-Lease or other United States Government agencies, the pack put in tin cans may be increased.

Cans for products which are non-essential from a primary defense standpoint have been ruled out entirely. For the duration, at least, dogfood will come otherwise than in tin cans. And so will beer, dried beans, baking powder, cereals and flour, spices and condiments, and tobacco.

SIGNIFICANT imports of tin are almost out of the question, now that Japan controls British Malaya and the Dutch East Indies; and recovery of tin from old cans is difficult, largely because of the labels, lacquer, and lithograph coatings used by manufacturers. But one West Coast firm is reported to have set up a pilot plant to develop a practical process for detinning, and to be accepting empties as they are discarded, without any special cleaning operation. The plant has unloading equipment, an inspection station, rotary screens for the removal of dirt, an incinerator for charring cans to destroy combustible material, shredding and prewashing machinery, and complete equipment for continuous detinning by the alkali process. Since the reclamation of tin in this way does not seem to be commercially feasible because of the cost, the pilot plant has been set up with the frank hope that the Government

will eventually finance operations.

As a possible alternate to the reclaiming of tin, it is reported that a new process of steel plate manufacture yields a product about as good as tinplate. The process adds a golden sheen by converting the surfaces of sheet steel chemically into a rust- and corrosion-resistant iron phosphate coating. The treated sheets are lacquered for further protection and the cans are labeled just as cans have been labeled for years.

Glass is also expected to help fill the gap left by the shortage of tin. Plastics already have appeared in the form of single-service beer containers. And paper, treated with paraffin and other substances so as to be rendered moistureproof, can be put to additional uses in the container field.

There is no immediate shortage of wood for the production of crates and boxes, but there may be a shortage later on. The War Production Board is already working on a plan whereby boxes and crates can be assembled at city markets for reuse in producing areas, and the Quartermaster-General has instructed Army posts to return containers, including egg crates, as promptly as possible to trade channels.

A DEVELOPMENT that may be of lasting benefit is the trend toward greater standardization in the container industry. At the present time the Freight Container Bureau, an agency established and sponsored by the railroads, recognizes about 540 different sizes of crates, drums, and sacks for marketing fruits and vegetables. Such a large number of sizes inevitably leads to confusion and loss of efficiency in marketing. But reduction in the number of sizes to approximately 110 was recommended at a recent meeting of the National Container Committee as a necessary step in making the best use of available materials. The Committee, composed of shippers and receivers, met with railroad representatives and members of the War Production Board and the

United States Department of Agriculture.

The War Production Board, in its order allocating the use of tinplate, has recognized the need for fewer sizes of tin cans. Small-sized cans have been eliminated entirely and emphasis has been placed on a few cans of certain sizes that have become more or less standardized through usage. Fruits and vegetables, for example, will be packed mostly in No. 2, No. 2½, and No. 10 cans. Such standardization is expected to save 7 percent of our available supplies of tinplate.

Lessing J. Rosenwald, of the War Production Board, has asked both manufacturers and users of glass containers to conserve raw materials by simplifying sizes, shapes, and finishes wherever possible. He has pointed out that a widespread and effective simplification program would reduce the variety of sizes and designs

now in use and thus would permit more effective use of manpower, fuel, and equipment. Another objective of the simplification program is to reduce the quantity of molding equipment used in container manufacture.

THE container industry undoubtedly will have to cope with even more serious difficulties as we set about the grim business of winning the war. But the pattern has already been laid out. Basically, it is a matter of conserving existing supplies through allocation, more careful use, and standardization—together with the development of substitutes. The progress made thus far indicates that the enormous quantities of food being produced will be adequately packaged.

HARRY HENDERSON,
*Agricultural Marketing
Administration.*

Farm Transportation and the War

ONE of the most serious shortages looming in this country—one which will intensify the shortage of many commodities—is that of transportation. By the fall of 1942 the transportation problem will be acute. On top of a greatly increased tonnage of commodities—and numbers of men—to be moved, are the difficulties arising out of loss and diversion of ships and an impending deterioration in motor transport.

Tentative estimates suggest that the realization of farm production goals this year will mean a million tons of hogs more than last year to be hauled by truck from farms to primary points; likewise 5 million tons more of milk to cheese factories, condensaries and drying plants. Add together the increased volume of dairy, livestock, and poultry products, grain, oilseeds, fruits, vegetables, and fibers necessary for war needs, which must flow from farm to storage, to manufacture, finally to

consumption, and the sum represents an unknown but certainly large new call upon transport facilities. In the first stage this means highway transport.

IN 1941, the United States had registered a total of 34,590,720 motor vehicles of all kinds (an increase of 2,537,859 over 1940), according to estimates of the Public Roads Administration. In 1941, there were registered 4,911,500 privately owned motor-trucks and tractor trucks and 635,620 publicly owned trucks. By comparison, in 1935 there were 3,647,414 privately owned and perhaps 100,000 to 200,000 publicly owned trucks.

The 1940 census showed 4,144,136 automobiles and 1,047,084 motor-trucks on farms in the United States. (In 1930 the number of automobiles was 4,134,675 and of motortrucks 900,385). Of the million trucks on farms in 1940, some 390,800 were

listed as comparatively new - that is, of models between 1936 and 1940. Of models between 1931 and 1936, the census listed 245,034, models of 1930 and earlier 294,249. The average age of all farm motortrucks and automobiles was probably about 6 to 7 years.

The farm-truck situation was presumably improved through new purchases in 1940 and 1941, but it is probable that the rubber on these trucks is at the stage at which the most careful conservation is absolutely necessary.

ON the whole, the beginning of 1942 found the country with the best motortruck equipment in its history. It had roughly 5½ million trucks, representing apparently a peak in carrying capacity and in miles of serviceability, but a peak which probably cannot long be maintained.

Many statistical calculations have been made of the rubber situation, including all the possibilities of reclaimed, synthetic, and other rubber; but they all come back to the fact that there will be little or no more rubber for civilian tires. When the present tires are gone on our cars and motortrucks, there will be no more for most people, for a long while.

The 5½ million motortrucks now on hand, including the million trucks on farms, will last effectively just about as long as their tires last. Rubber is the limiting factor. As the tires go, so go the trucks. And as the trucks go, so goes the primary transport system upon which the farmers of this country have come to depend.

The first point that stands out in this situation is that it must be impressed upon every farm car and motortruck owner that this is a deadly serious problem: That *virtually no more rubber is in sight for tires*; that his truck is now just as good as its *weakest tire*; that he should be looking ahead to the day when his truck will finally have to be set aside. With proper

care and good luck that might be 5 of 8 years hence; or perhaps it is no further ahead than next year; or carelessness can make it next fall or next month! It is true that present regulations permit a farmer to apply for new tires or recaps, under certain conditions; and presumably farmers will remain reasonably high on the preferred list. But it is not to be expected that these permissive regulations will add any new rubber to the national stock-pile. When the day comes that there is no more rubber for any civilian users, the permission to buy will mean nothing.

A MAJOR necessity now is for immediate organization, by local communities, of motortruck transportation. Federal or State agencies can help. But the vital need is for some kind of organized arrangement in every country neighborhood to "double up" on loads from farm to town and likewise on bringing supplies from town to farm, and for errands and trips of all kinds.

In many cases farm neighbors are already doing this. But in many more the movement needs to be started and brought to an orderly arrangement whereby the use of neighborhood vehicles can be rotated and every possible mile of service can be gotten out of these tires and trucks.

There is a further essential job of organizing commercial motortruck service to take care of part of the haul between farm and town, and to help on the broader, long-distance problem. That is a job for transportation men.

But the organization of farm and locally owned trucks to piece out the service of each and stop the unnecessary duplication of trips is a job that finally comes down into every farm neighborhood—and it is a job that needs to be done quickly.

OTHER things which might be done to help in this transportation situation include more careful planning of

railroad shipments to help reduce congestion and delay and facilitate the moving of empty cars. It may even be found feasible and wise to build up reserve stocks of essential foods and materials in different parts of the country; or production may be further adjusted so as to reduce long shipments.

Farmers should support all steps to improve efficiency in the use of railway equipment—such matters as heavier loading per car, faster loading and unloading of cars, more careful timing of orders for cars, and the like. It is possible for public agencies to take various measures for the more efficient use of motortrucks in commercial service.

All rural authorities should be giving thought to the measures which may become necessary to maintain farm-to-market highways in good repair. This is likely to become important as such roads tend to go down because of the probable reduction of W. P. A. labor and of available public funds.

THE following suggestions are offered for the conservation of farm cars and trucks:

(1) Take the best possible care of cars and trucks and especially of tires. Have tires inflated every week to proper pressure. Have wheels aligned. Exchange right and left tires once in a while. Look them over often for cracks or cuts, and repair these before you have a blow-out. Don't let tires stand on an oily or greasy floor and don't leave them standing in hot sun. Don't drive faster than 30 miles an hour—speed is the bitter enemy of tires.

(2) Arrange with one or more neighbors to exchange trips. Do all your regular hauling, so far as possible, on that basis. Form a little group on your road to do this in a systematic way. Pool your loads.

(3) Don't go "empty." If you have an errand in town call up your neighbors and take everybody on the

road who needs to go that day—then let them do the same by you. Make similar arrangements for small part-loads of produce. Don't make a trip alone with just a bushel of potatoes or a sack of grain, nor to get one or two small items of supplies. "Double up." Cooperate with your neighbors.

(4) Plan your buying in town so as to save trips.

(5) Pick up all nails, pieces of board, broken glass, jagged rock in the highway and around your own buildings and driveways.

(6) Make sure that you carry an inflated spare tire, or jack, air pump, and patching kit. A ruined tube or casing now is a tragedy.

(7) Arrange to keep larger supplies on hand—things like fuel, purchased feed, and groceries. This will not only save trips but will assure having them on hand in time of possible transportation tie-ups.

(8) Arrange storage space so you can hold your produce at home for a time, in case of unexpected transportation shortage.

(9) Cut down on some of the youngsters' trips into town to the movies, and rides just for fun. As a rule, young drivers are harder on cars and tires than are mature persons.

(10) Eliminate driving in bad weather so far as possible. Wet roads, ice, and mud are hard on tires.

(11) Have a place where your car and spare parts can be securely locked up—and keep the car and truck under lock, especially at night.

(12) Finally, look ahead a year or two or three. How will you be fixed then for car or motortruck? Remember, for more than a hundred years virtually all the farm produce in this country was hauled to market by animal power. Don't let the matter of horse-and-wagon equipment get entirely out of your mind. We helped to win one World War that way and we can win another that way if we have to—and we may have to.

A. B. GENUNG.

A Study of Poultry Markets

AT THE request of the American Farm Bureau Federation, the Bureau of Agricultural Economics last year began an extensive study of the marketing of poultry and eggs. The Bureau selected 29 terminal poultry markets for study. By year's end, 16 markets east of the Mississippi River had been covered. Significant phases of the work were reported to the Federation at its annual meeting at Chicago in December. The Federation commended the study and urged its continuance "to cover the entire United States."

The survey covered virtually all of the leading markets east of the Mississippi River, except New York, Cincinnati, and Louisville. Included were Boston, Philadelphia, Buffalo, Baltimore, Washington, Detroit, Cleveland, Chicago, Indianapolis, Memphis, New Orleans, Birmingham, Atlanta, Charlotte, and Jacksonville.

It was found that slightly less than half the poultry reaching the 16 cities was live poultry, while the remainder was dressed. In some of the southern cities, more than 80 percent of the receipts are live poultry. At least in the north and east, dressed poultry seems to be taking the place of the live product. Around 95 percent of all the live poultry is moved to market by truck. The most common dealer contacting the producer is the trucker who operates his own truck. The producer is paid varying amounts under the market price, depending on the distance from market.

IN MOST of the cities, more than 85 percent of the live poultry moves through regular markets; but in six of the smaller cities there are no definite poultry and egg markets and the dealers are scattered over a wide area. These scattered markets waste time and money for buyers and small shippers or producers alike.

In cities where definite market areas exist, motortruck receipts of live poultry go directly to the dealers' stores. This eliminates the extra handling and hauling which accompany rail transportation in most of these markets. Even in the markets promoted and established by railroads, few dealers have rail sidings for direct unloading.

Many of the live-poultry markets have streets too narrow for modern truck-trailer units. In many cases, the buyer must carry or wheel his purchases on hand trucks along the street, and this is sometimes true for trucks making deliveries. The traffic problem could be alleviated by providing parking space for buyers' trucks and for long-distance trucks waiting for a chance to unload.

Many of the stores are old and narrow, lack unloading platforms at truck-bed height, and have no rear entrances. The small stores often will not hold all the coops, which must be stacked on the sidewalk. All these things delay the unloading of live poultry and cause heavier shrinkage, particularly in warm weather.

Scarcely any two markets have the same methods for handling live poultry. The commission man, once common, is disappearing rapidly. Commission sales are important now in only 4 of the 16 cities—Buffalo, Philadelphia, Baltimore, and Cleveland. In many other cities competition is forcing transactions to an outright sale basis. Producers demand cash from the truckers, who in turn demand cash from the receivers in order that they may buy more poultry.

IN THE South, consumers very definitely prefer fresh-killed poultry. In the northern markets, in addition to commission selling, live poultry is handled by wholesale re-

ceivers who usually have facilities for dressing and are in a position to sell either live or dressed poultry to the retail stores. In Washington, Memphis, and Boston, strict health and zoning regulations tend to prevent the selling of live poultry in retail stores. With few exceptions, live poultry in these cities is dressed at the stores of wholesale receivers. More frequent inspection is possible as a result of this concentration in fewer dressing plants.

While most of the live poultry goes to independent receivers, in Jacksonville, New Orleans, and Birmingham the chain stores are handling live poultry in their retail stores. Some of them operate dressing plants which supply fresh-killed poultry to their retail units.

Selling hours in most of the markets have been established merely by custom. However, in Chicago, Detroit, and Boston union rules determine the hours—usually from 7 a. m. to 3 p. m. There was no indication that business suffered as a result, except perhaps from some delay and congestion in unloading in the morning.

There is no official grading of live poultry, and the grades in use vary from one market to another and also vary with the demand for any particular class of bird.

Although the railroads haul only 5 percent of the live poultry, they carry a little more than half of the dressed poultry. Refrigerator cars are the most common means of transportation, but in recent years refrigerated and insulated truck shipments have increased considerably. Split cars of poultry, eggs, and butter are often shipped to the smaller markets.

IN THE 16 cities surveyed, packing-house branches and chain stores handle more than half the dressed poultry. Only a little more than half is handled in the regular markets, as contrasted with nearly 80 percent of the live poultry. However, the dressed poultry is graded, much of it is bought

by telephone, and as a result there is less need for a concentrated market.

Dressed poultry is handled on the same markets that handle live poultry; and, generally speaking, it is sold as a sideline with other perishable products, such as meats, eggs, butter, and provisions. The wholesalers and jobbers of dressed poultry, as a rule, have better facilities than the live poultry dealers, although in many cases they are affected by the bad traffic conditions and lack of rail connections.

The Urner-Barry Producers Price Current is used as a basis of settlement for fresh-killed or frozen stock in the eastern markets and thus influences the operation of western packing plants supplying these markets. Receivers also make wide use of the Chicago Price Current Quotations. The commission method of sale is not used, and outright sales are common. Brokers collect a brokerage fee varying from $\frac{1}{4}$ to $\frac{1}{2}$ cent a pound for their services.

Many of the poultry stores and much of the equipment were very unsanitary. The statistics on receipts and prices collected by the Agricultural Marketing Administration in Chicago, Boston, Philadelphia, and Baltimore are widely used but in some other cities no information on volume of receipts is available. In some of the exchanges where the amount of trading is rather limited, the prices established seem to determine the general level of prices on the market and perhaps over a wide area.

"If live poultry is to continue to move to the large cities, the markets where it is handled * * * must be improved," the report comments. "These markets, * * * with their high cost of operation, are without doubt contributing to the shift from live poultry to dressed poultry * * *. If adequate markets were available, it would be possible to break up some of the unfair practices that now exist, and certain costs could also be reduced or eliminated."

COMPLAINTS of racketeering were made in only three of the cities — three of the largest in the group. This took such forms as compulsory use of hired trucks, requirements that an excessive number of men be hired to unload trucks, collection of inspection fees for services not performed, and some discrimination against poultry dressed before it reached the city, through higher inspection fees. A number of other complaints were made about questionable practices.

"Better organization and control of the markets would undoubtedly contribute to a solution of some of these problems in that it would facilitate the enforcement of proper regulations by

the various Governmental agencies," the report concludes.

It recommends: (1) Improving some of the established markets in order to make them operate more efficiently; (2) bringing the marketing of poultry under the Perishable Agricultural Commodities Act or expanding the activities of the Packers and Stock Yards Division, and strengthening the work of the Food and Drug Administration; (3) improving the grading and market news services; (4) proper regulation of established markets to put a stop to short weights, and other unethical practices.

FRANKLIN THACKREY

Farm Real Estate Values Rise

A GENERAL increase in land values as well as widespread interest in opportunities to buy farm properties are evident from reports received in the annual farm real estate survey by the Bureau of Agricultural Economics. A summary of these reports indicates a rise in values of 7 percent for the country as a whole during the past year. This brings the index of values to 91 percent of the 1912-14 base period. The increase is the most substantial that has occurred since the years just prior to 1920, and is almost twice the annual increases reported for the years immediately following the depression low in 1933. The substantial advance of the past year marks the end of a 5-year period during which the National average was remarkably stable at about 85 percent of the prewar average.

Farm real estate values increased generally the country over during 1941 with some advance reported for each of the 48 States. Higher values by approximately 10 percent were reported for the East North Central and East South Central groups of States; about 8 percent in the Moun-

tain States, and about 6 percent in the West North Central, South Atlantic, West South Central and Pacific Divisions. Increases were more limited in the North Atlantic States, with a rise of 3 percent or less in both the Middle Atlantic and New England States.

The largest advance in any State during the past year was in Indiana—14 percent. Increases, almost as large, were indicated for Illinois, Kentucky, and Michigan, where values rose about 13 percent. Ten other States, including four in the Mountain region, reported higher values of 9 to 11 percent.

DURING the past year there were, in general, more influences operating favorably to an improved farm-real-estate market than at any other time since 1920. The prevailing high number of voluntary and low number of forced sales were significant features of the strengthening situation. When the volume of sales is considered along with the fact that in the better farming areas the land holdings of corporate lending agencies have been showing significant declines for several years, the rapid response of land values

to improved price and income levels should probably not be viewed with alarm.

While improved prices tend to hasten the sale of available farms, the removal from the market of the abnormally large number of farms for sale would be a factor which, by itself, would have a strengthening influence. This situation, along with some warranted rise in farm-land values due to higher price levels expected to prevail for the duration of the war, would appear to be the primary basis for explaining and possibly even justifying the substantial value increases that occurred during the past year.

EVEN though there might appear to be ample justification for the value increases which took place during the past year, and though current conditions indicate the relatively high farm prices may continue to prevail for the duration, there are conflicting forces operating which will influence the extent to which net incomes will increase during the next few years.

In many areas, there are already indications that the benefits of higher farm prices will, to a large extent, be offset by farm labor shortages with higher wages and generally higher production costs together with inadequate supplies of machinery, equipment, fertilizers, and transportation facilities due to priorities and allocations. These situations, along with prospects for price ceilings for farm products, increased income taxes and other expenses, would all tend to limit the expected income increases upon which to justify further substantial enhancement in values. Furthermore, there appears to be little basis for assuming that the currently high farm prices and demands will continue indefinitely, and consequently high incomes resulting from these temporary conditions should have only a limited effect on current land values.

IF A farm is purchased for operation or even long term investment, then capitalized earning power and not

speculative prospects should be the basis for determining its value. From this approach, a rough but fairly good approximation of the value of the farm would be 20 times its net rent after paying taxes and other expenses. In other words, if cash rent is \$7 an acre and taxes and other costs \$2 an acre, the reasonable value for this farm land would be in the neighborhood of \$100 an acre. But, it must be remembered that the net rent should be that which can reasonably be expected to prevail over a long period of years rather than current rent which at present might be above the expected future rent due to increased war time demands and prices. Thus, if the expected net rent for the next 3 years was up to \$10 per acre with no assurance of continuing at that level, then the value of the land should change relatively little. In fact, under such a circumstance, the value rise at present should be somewhat under the \$15 additional net rent which would accrue over the 3-year period. The chief danger of excessive land prices from purchases of this type arises through considering current incomes as the level which will continue.

WHERE land is purchased for speculative purposes, primary emphasis is placed on the hope that land prices will go higher, making it possible to sell at a profit. When there is much buying of this type, land prices go up and may get way out of line with normal values or the present value of the future earning power of the land. This is what happened in many areas between 1916 and 1920 and caused plenty of headaches between 1920 and 1935. Farmers and others interested in farming do not want this to happen again; the best way to avoid the serious consequences of excessive land prices, if they do occur, is to refrain from buying land when the price is out of line with normal values. Tenants and others interested in farming as a business will probably be better off in the long run if they pay high rents for a few years rather than

attempt to buy land at prices out of line with reasonable income expectations.

While current market values in general are probably not far out of line with normal values, a continua-

tion of last year's trends would, in a number of areas, soon put market values above those which could be supported by the expected future earning power of the land.

A. R. JOHNSON.

Camps Guide Farm Labor

MIGRATORY labor camps of the Farm Security Administration can play a significant part in meeting the farm labor problem this year. Established in 1935, in a time of labor surplus, these camps were designed to protect the migrant—and the community through which he passed—from the worst dangers of migrant life, by providing minimum housing, sanitary, and community facilities for a portion of the hundreds of thousands of workers who follow the crops. But, with current changes in the farm-labor supply, and with increased attention on the wartime production of food, new uses for the camps have developed.

One important use of the camps has been in the distribution of the farm labor supply. During 1939-41 the number of placements made by the Farm Placement Service in Washington, Oregon, and Idaho alone was nearly doubled. The number of placements increased by 110,000, of which about 100,000 were made by placement offices in Farm Security camps.

EFFECTIVE use of the camps as a base for routing workers to and from jobs was demonstrated last spring on the west coast. Strawberry pickers were needed in Oregon, while pickers in California were unemployed. Oregon growers turned to the State Employment Service for help. Arrangements were made with the California Employment Service for the transfer of idle strawberry pickers to Oregon. Pickers were recruited from the FSA camps, their transportation was paid by the growers and arranged by employment officials; on arrival in Oregon,

the pickers were housed in mobile camps.

As the Farm Placement Service is able to use the camps as a base from which to shift workers rapidly to new jobs, the lag in employment is taken up. Farm output increases as waiting periods decrease. Workers living in Farm Security camps in the Northwest average seven jobs per season. There is little layover between jobs. The camps cut down periods of unemployment by safeguarding and improving the health of workers with adequate housing and sanitary facilities with clinics and a program for emergency medical care. Day nurseries caring for babies and young children also free adult labor when needed.

Lack of adequate shelter commonly keeps farm workers from entering areas where labor is needed. Lack of housing was prominently mentioned among the difficulties in localities reporting farm labor shortages during 1941. To date this year, formal requests for the establishment of camps have been received from 72 counties in 19 States.

TRANSPORTATION problems confront agriculture this year. These include the possible lack of automobiles in transporting workers from one area to another. Emphasis must be placed upon the concentrating of scattered workers and their families, and their transportation in large groups. The migratory labor camps can facilitate this process.

Mobile camps designed for use in areas where camps are needed for only a few weeks at a time can be moved

from place to place. Tents with tent platforms to house the families and community facilities moved by truck, and large trailers to house power plants, clinics, and sanitary units make up the usual mobile camp equipment. There is no definite number of families for any one camp. Different conditions require camps of various sizes; all equipment is designed for flexible use in different combinations. Insofar as possible, the camps follow the migratory workers as the workers in turn follow the crops. In emergency situations the camps can be moved anywhere.

SEVENTY-THREE mobile camps are in operation on the west coast—in Arizona, California, Washington, Oregon, and Idaho. This spring and summer, 19 new mobile units are opening along the Atlantic Seaboard, serving Maryland, Virginia, North Carolina, Delaware, New Jersey, and New York. Next winter, 14 of these units will settle in Florida areas where citrus fruits and vegetable harvesting is concentrated. Forty-one camp sites have been leased, or are being leased, to

serve the 19 units this season; it is expected that these camps will relieve a possible housing shortage in areas where seasonal labor is needed most.

While single and unattached men have formed the largest proportion of the agricultural workers on crops along the Atlantic coast, it is expected that fewer men will be available for work this year, that more families will make up the migrant population. Adequate housing must be made available for these families, not only for their own health and protection, but to induce workers to come into the areas for the harvesting seasons.

The Farm Security Administration makes no pretense of solving with its migratory camp program the problems inherent in situations involving seasonal agricultural labor. But, by improving the health and morale of some of the workers, by providing a base through which other agencies can function, the camps can be an important factor in facilitating the production of food for freedom.

RICHARD SASULY,
Farm Security Administration.

About Guayule Rubber

PURPOSE of the Guayule Rubber Production Act signed by President Roosevelt last month is "to make available a domestic source of crude rubber for emergency and defense uses." The act authorizes the Department of Agriculture to buy out the Intercontinental Rubber Co.'s guayule seed supplies, processes and facilities at Salinas, Calif., where there are 577 acres of growing shrubs, 4 years or older, and a small factory used to extract the rubber from the shrubs. The law limits field plantings to 75,000 acres—which is about all that can be accomplished by the spring of 1943 with the seed available—but the act could be amended later if the situation warrants.

Secretary of Agriculture Claude R.

"Gwa-yoo-la" or "wi-oo-la"—it makes no difference how you pronounce it, the important thing is that the guayule plant yields rubber. Historians say that it was once used by the Aztecs for making balls used in a game similar to our basketball. They have yet to record that centuries later it was to be used to help win for Democracy a fight against aggression * * * Anyhow, the guayule plant has possibilities in lessening the wartime gap in our rubber supplies. These possibilities are discussed in the accompanying article.—Ed.

Wickard immediately directed the Forest Service and the Bureau of

Plant Industry to proceed with a program for government production of guayule rubber in the Western Hemisphere. The Department had been studying on a small scale since the early 1920's the guayule plant and its potentialities. The Forest Service is charged with production, the BPI with research, and other bureaus of the Department of Agriculture are to be called in as needed.

First step was the purchase for \$1,721,235 of the Salinas properties and processes of the Intercontinental Rubber Co. Then a seed-treating plant and a 1,000-man labor camp to house the workers on the project were built. Windbreak fencing was transferred from the Prairie States Forestry Project to protect the nursery. In a few days more than 125 trucks, 85 tractors, and 420 pieces of farm machinery were started toward Salinas or were on the job. A thousand acres have already been planted with guayule seedlings under Government supervision. By next spring, this number will be expanded to about 60,000 acres, as authorized by law.

GUAYULE is a rubber-bearing desert shrub native to north central Mexico and extending across the Rio Grande somewhat into Texas. Since the beginning of this century, the Intercontinental Rubber Co. has been producing rubber in Mexico to a limited extent from the wild shrub. Almost all this rubber has been shipped into the United States, with imports averaging about 5,000 tons a year. Production of such wild rubber is expected to be stepped up to as much as 10,000 tons a year, but this is believed to be the outside limit that is possible without unduly depleting the natural supply of the shrub. Experiments to domesticate the plant were begun in Mexico in 1907, but these were shifted to the United States as a result of the Mexican Revolution of 1912. For climatic reasons the Salinas Valley of California was selected as the center of operations.

Chief object of the experiments has been to increase the rubber content of the guayule to the point where guayule could compete commercially with plantation rubber. The wild shrub of Mexico yields 8 to 12 percent of rubber based on dry weight of the shrubs, and has a resin content of about 20 percent. Selections have now been made which after 4 years in the field yield nearly 20 percent of rubber dry weight, with a resin content of 16 percent in the extracted rubber. This improvement was accompanied by new methods of cultivation; the use of special machinery; and better ways of extracting rubber.

Guayule rubber is considered by experts to be approximately equal in quality to high-grade plantation rubber. The cost of taking out the resin has been estimated at 1 to 5 cents a pound. Indeed, the process of de-resination may pay for itself in that the resin can be used in plastics and a variety of other products. Use of the rubber requires no change in the nation's rubber manufacturing plants.

DEPARTMENT technicians estimate that under favorable conditions, guayule can be sold at 20 cents a pound. This compares to the present price of 22½ cents a pound for plantation rubber, and to an estimated minimum of 30 cents a pound for synthetic rubber. Plantation rubber averaged 12.4 cents a pound during the decade 1930 to 1939, but it can withstand a declining price down to 10 cents or even 6 cents a pound. Under normal competitive conditions, guayule could not long survive a price much below the present price of rubber.

For these reasons, Department technicians believe that guayule offers insufficient returns on a long-time basis to replace plantation rubber. For long term supplies at costs which are competitive with those for rubber produced elsewhere in the world, they look to the development of plantation rubber in Tropical America. But the trees we are planting in Latin

America will not begin producing for 7 years; guayule, meanwhile, will be needed, along with the synthetic rubber to be produced in this country.

Some of the guayule we are growing now may be used to put new life into reclaimed rubber. Some of it may be used in mixtures with synthetic rubber. Testimony before Congress in connection with the Guayule Act revealed that in order to produce quality tires, real rubber must be used in combination with synthetic rubber. It was pointed out that Germany had found it necessary to use 65 percent natural rubber and 35 percent synthetic rubber to meet its rubber needs.

HOW much guayule are we likely to get under the most favorable conditions? We have only a limited supply of seeds—not quite enough for next year's 75,000 acres of field plantings provided by law. Estimates of yield are 350 pounds of rubber per acre of guayule if the plant is harvested at the end of the second year in the field; 700 pounds at the end of the third year; 1,200 pounds, or even more, if the shrub is not harvested until the end of 4 years. Most rubber is obtained when the shrub is 4 to 7 years old.

The United States normally uses 600,000 to 700,000 tons of rubber a year. If we produce 75,000 acres of guayule and the average yield is 1,200 pounds per acre, we would have 45,000 tons of guayule rubber—or 7 percent of a normal year's requirements. We need rubber immediately. But since the seed and seedling supply of guayule is so limited, we cannot harvest too soon if we are to preserve the improved strains that have been developed during the last 30 years. Some specialists have estimated that we might be able to process a small quantity of rubber during the next 2 years—possibly 1,000 tons—but our main purpose during this period probably will be to increase the supply of seed and seedlings. Production could be increased greatly in subse-

quent years as seed supplies become available.

Only portions of California, Arizona, Texas, New Mexico, and possibly adjacent States have the climate in which guayule may be grown successfully. Rainfall of only 8 to 20 inches a year is all that is needed for normal yields, together with long dry summers and winter temperatures not below 5° F. But even to the farmers in these areas, guayule has little meaning for the time being. Officials in charge of the project recall that when farmers in California planted guayule in 1926, rubber was selling at \$1.25 a pound. When rubber dropped to 3 cents a pound in 1932, farmers plowed up their fields and planted wheat instead. As the present project advances, officials expect that guayule growing can be contracted to individual farmers, but right now the supply of seed and seedlings is so limited that none is being distributed.

In production, presprouted seeds are mixed with sawdust and planted in nursery beds with a machine that distributes the seeds evenly and covers them with a thin layer of sand. These nursery beds are kept moist by sprinkling several times a day with overhead irrigation. After 8 to 12 months, the plants are given a chemical dip and transplanted to the field where they are cultivated like corn. Seed is harvested at the end of each year by a vacuum-type collector.

IF the present price of plantation rubber is maintained, guayule growing might well be continued on a permanent basis after the war should we so desire. Even if the price of rubber falls, the possibility is that further improvement in strains and methods of growing guayule might bring the cost of guayule rubber down to a competitive level. The proposal also has been made to maintain guayule in nurseries after the war as insurance against future emergencies.

—ANN S. KHEEL.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of industrial workers (1935-39 = 100) ²	Cost of living (1935-39 = 100) ³	Wholesale prices of all commodities ⁴	1910-14=100			Farm wages	Taxes ⁵
					Prices paid by farmers for commodities used in —				
					Living	Production	Living and production		
1925	90	128	125	151	164	147	157	176	270
1926	96	131	126	146	162	146	155	179	271
1927	95	128	124	139	159	145	153	179	277
1928	99	127	123	141	160	148	155	179	278
1929	110	134	122	139	158	147	153	180	281
1930	91	110	119	126	148	140	145	167	277
1931	75	85	109	107	126	122	124	130	254
1932	68	59	98	95	108	107	107	96	220
1933	69	61	92	96	109	108	109	85	188
1934	75	76	96	100	122	125	123	95	178
1935	87	87	98	117	124	126	125	103	180
1936	163	100	99	118	122	126	124	111	181
1937	113	117	103	126	128	135	130	126	186
1938	89	91	101	115	122	124	122	125	183
1939	108	105	99	113	120	122	121	123	186
1940	123	119	100	115	121	124	123	126	193
1941	156	163	105	127	133	133	133	147	—
1941—April	144	142	102	121	—	—	124	138	—
May	154	157	103	124	—	—	125	—	—
June	159	167	105	127	129	128	128	—	—
July	160	173	105	130	—	—	130	160	—
August	160	174	106	132	—	—	133	—	—
September	161	177	108	134	136	135	136	—	—
October	163	178	109	135	—	—	139	165	—
November	166	180	110	135	—	—	141	—	—
December	167	187	110	137	143	141	142	—	—
1942—January	171	196	112	140	—	—	146	166	—
February	172	194	113	141	—	—	147	—	—
March	172	193	114	142	150	149	150	167	—
April ⁶	—	—	—	144	—	—	151	177	—

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio prices received to prices paid
	Grains	Cotton and cottonseed	Fruits	Truck crops	Ment animals	Dairy products	Cheek-ens and eggs	
1925	167	177	172	153	141	151	163	156
1926	131	122	138	143	147	152	159	145
1927	128	128	144	121	140	155	144	139
1928	130	152	176	159	151	158	153	149
1929	120	144	141	149	156	157	162	146
1930	100	102	162	140	134	137	129	126
1931	63	63	98	117	92	108	100	87
1932	44	47	82	102	63	85	82	65
1933	62	64	74	105	60	82	75	70
1934	93	59	100	103	68	95	89	90
1935	103	101	91	125	117	108	117	108
1936	108	100	100	111	119	119	115	114
1937	126	95	122	123	132	124	111	121
1938	74	79	73	101	114	109	108	95
1939	72	73	77	105	110	104	94	93
1940	85	81	70	114	108	113	96	98
1941	96	113	92	145	144	131	122	122
April	90	88	89	161	176	121	104	110
May	93	98	89	146	136	124	107	112
June	66	107	97	146	142	126	118	118
July	99	121	94	130	151	132	127	125
August	90	128	100	133	175	135	130	131
September	106	150	89	145	163	140	141	139
October	101	144	107	164	154	145	146	139
November	103	136	98	147	149	143	137	135
December	112	138	98	162	157	148	153	143
1942	119	143	162	204	164	148	147	149
January	121	160	98	161	173	147	135	145
February	122	151	111	136	180	144	130	146
March	120	158	118	158	190	142	131	150
April	—	—	—	—	—	—	—	—

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941

² Adjusted for seasonal variation. Revised November 1941.

³ Bureau of Labor Statistics

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5

⁵ These indexes are based on retail prices paid by farmers for commodities used in living and production reported quarterly for March, June, September, and December. The indexes for other months are interpolations between the successive quarterly indexes

⁶ Index of farm real estate taxes per acre. Base period represents taxes levied in the calendar years 1909-12, payable mostly within the period Aug. 1, 1909-July 31, 1914. ⁷ Preliminary. ⁸ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers

VICTORY ON THE FARM FRONT

THE

AGRICULTURAL

SITUATION

AUGUST 1942

A Brief Summary of Economic Conditions

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The Farmer Comes Through

MID YEAR CROP AND LIVESTOCK REPORTS show strikingly the great part that our farmers are playing in World War II. They show without exception that despite mounting difficulties in obtaining the materials and manpower needed in the production of agricultural commodities, the farmers are cultivating record acreages of oil crops, large acreages of food and feed crops generally, and producing a record volume of meats, dairy products and poultry products this year. The Secretary of Agriculture stated upon publication of the midyear crop report

American farmers may well be proud of the tremendous production of food and fiber indicated by the July crop report. Barring unforeseen difficulties they will make 1942 a year of record production. They are meeting production schedules despite some labor shortages, some unfavorable weather and other difficulties * * * Each day the part that food must play in the winning of the war becomes more apparent.

GREATEST FARM VICTORY is in offsetting the loss of imports of vegetable oils. Acreages of oil crops—peanuts, soybeans, flaxseed—are a sensationally high record this year, and the production of animal fats will make a new peak. Important byproduct of the oil crops is high-protein feed, and the volume this year will supplement greatly our feed supply for the production of record totals of meats, milk, eggs, and other animal products. Add to these the near-record quantities of fruits and vegetables, and the total food production for civilian, military, and Lend-Lease combined will bulk probably 9 percent larger than in 1941, and 25 percent larger than the 1935-39 average. Goals for 1942 called for a 6-percent increase in total agricultural production—the farmers will make 9, if all goes well with the condition of the crops and livestock between now and harvest.

FOR several months past, the Bureau of Agricultural Economics has been studying agricultural production possibilities in 1943. Competent analysts believe that larger production will become increasingly hard to get as greater difficulty is encountered in obtaining the implements of production—the machinery and manpower, fertilizer and production supplies of all kinds.

Much less steel will be available for farm machinery next year, possibly less than half the quantity allotted for 1942. * * * Some 4 or 5 million more men may be called in the year. It is inevitable that many young farmers and farm laborers will be in this group. Some of them will be replaced by women, children, old folks, and other less experienced help; but even if numbers of farm workers are fairly well maintained, the total efficiency is almost sure to decline.

Farmers may have difficulty in obtaining enough nitrogenous fertilizers, and the shortage must be offset by increased plantings of winter legumes, greater utilization of manures, perhaps by use of oil-seed meals as fertilizers, and by priorities on use of available supplies. Overtaxing of transportation, warehousing and processing facilities may further increase the difficulties confronting farm producers in 1943.

EVERY so-called commercial farm is probably in full cultivation this year—and there are few idle acres. The total area of principal crops for harvest in 1942 is more than 340 million acres, as compared with 332 million acres harvested in 1941, and with 332 million average for the ten years 1930-39. To be sure, opportunity exists on many small farms to increase the production of food, but such increases are mainly in the direction of providing more food for the people on these farms.

New records have been made in per acre yields of crops and per unit yields of livestock the country over during recent years, but it is not reasonable to expect such gains can be continued indefinitely. Nature has been kind, but a bad growing season would speedily check the rising trend of total agricultural production. Parenthetically, more than a little concern has been felt this year as to the possibility of adverse weather conditions; as this statement is written in early August, it is fully realized that many crops—the corn crop in especial—have yet to go through a critical season of growth.

IN striving to achieve a higher peak of agricultural production in 1943, the paramount need is for food and fiber for military use at home and abroad on all united fronts. Possibly,

after satisfying these extraordinary requirements there may be some tight situations with regard to the supplies available for civilian use. Supplies may bulk large in total, but there may be shortages of some foods and surpluses of others. It is conceivable that in order to safeguard the health of our people on the home front rationing programs may have to be extended.

Of vital concern is the maintenance of adequate nutrition among our own civilians. Our national standards are high in comparison to those in other countries; nevertheless, many deficiencies have been brought to light through the selective service. We cannot hope to make much larger supplies of food available for domestic civilian consumption during the war. Rather, we shall have to do everything possible to obtain better nutrition from improved handling of the foods we now have.

THE Department of Agriculture expects in coming weeks to develop for the guidance of farmers

an over-all production program designed to meet the extraordinary wartime requirements for food for civilian and military use and for Lend-Lease export, in 1943; but a program which must take into consideration the limitations and possibilities of our land resources and the limitations imposed by our diminishing production supplies. This over-all program will be subdivided into regional and area programs organized to suit the physical and economic conditions within regions and areas, and to indicate the desirable and possible shifts in production. Much as last year, National goals, developed by the nation's foremost agricultural specialists, will be broken down into State, county, and individual farm goals to provide informed and intelligent direction of voluntary action by 6 million farm operators engaged in the production of literally hundreds of different farm commodities—the kind of guidance that is essential to enable agriculture to assert its full strength towards victory.

H. R. TOLLEY.

Commodity Reviews

PRODUCTION: Banner Year

FARMERS have put in for harvest this year the biggest acreage of principal crops since 1932—more than 340 million acres. This compares with 332 million in 1941, and with 332 million average for the 10 years 1930-39. Nearly half the total acreage for harvest is in the four principal feed grains (corn, oats, barley, grain sorghums)—153 million acres, as compared with 147 million in 1941, and with 153 million average for 1930-39.

Biggest increases this year over last are in oil crops (peanuts, soybeans, flaxseed), acreages of these totaling 22.9 million, as compared with 15.1 million in 1941, and with 8.8 million average for 1930-39. Cotton is increased by nearly 1 million acres;

smaller increases are shown for rye, rice, hay, dry beans, dry peas, potatoes, tobacco, sugar cane, sugar beets, and sorgo for syrup. Biggest decrease is in wheat, acreage for harvest totaling 50.6 million as contrasted with 55.8 million in 1941, and with 55.9 million average in 1930-39.

Crop conditions in July promised unusually good yields this year, averaging higher by 3 percent than in any July during the past 4 years. Fulfillment of this promise suggested that the total out-turn of principal crops may exceed last year's by 3 percent, and come close to the all-time high in 1937 when cotton production was unusually large. The Crop Reporting Board summed up the outlook: "A banner year for crops and livestock appears in the making."

The Crop Board added: "Present prospects are particularly favorable in the Great Plains in contrast to the recent drought years. In the 10 Great Plains States, production of small grains is expected to total about 29 million tons compared with 9 million in 1934, and a 10-year (1930-39) average of 18 million tons. Over most of this area the scars which the repeated droughts left on the land and on the people are disappearing."

DEMAND: Big

Food requirements for civilian, military, and Lend-Lease export continue to increase. The rising demand for agricultural products is reflected in firm markets, in prices at relatively high average levels, in prospects that cash farm income this year will be close to the largest on Government record. Costs of farm production also are up—possibly to an all-time high—principally on account of the biggest farm payroll in many years.

Net farm income will be larger this year than last, making surplus available for the payment of debts and increased Federal income taxes, and for the purchase of War Bonds. Farm debt (mortgage debt plus short term loans by banks and Federal agencies) totals a little more than 9 billion dollars. Farm debt has increased slightly during the last 2 years but is much smaller than the all-time high of 14 billions in 1922. Interest rates also are considerably lower than at that time.

Indicative of the response of farmers to wartime requirements for increased production is the fact that production of milk and eggs this year will be the largest on record, that hog slaughter under Federal inspection is expected to be 20 percent larger in 1942-43 than in 1941-42, and that cattle marketings will be considerably larger during the remainder of this year than during the like period of 1941.

Increased production of fats and oils will go far toward making up for reduced imports, production of vege-

tables for consumption as fresh and processed foods will exceed the 1941 output, and the production of fruits will be a near-record this year. Total food production should be larger than ever before.

PRICES: Higher

Average of prices received by farmers advanced 3 points during the month ended July 15: average of prices paid was unchanged. On the up side of prices received were livestock and livestock products, cotton, and truck crops. Farm wage rates were the highest since 1920. Farm commodities selling above parity on July 15 included potatoes, cattle, calves, hogs, lambs, wool, eggs, chickens and butterfat; below parity were cotton, wheat, and corn.

Bureau of Labor Statistics reported a rise of 1.3 percent in retail prices of food during the first month of broadened price control—May 15 to June 15. This was the same rate of advance prevailing since March 1941, but it was the result largely of higher prices on commodities not covered by ceilings—principally apples, oranges, and lamb.

Average of prices received by farmers is expected to continue at approximate parity during the remainder of this year.

WAGES: High Level

Farm wage rates—more than double the 1910-14 level—are the highest in 22 years. National average of farm wages per month with board was \$47.29 in July, compared with \$36.45 a year earlier, and with \$22.09 annual average for the period 1910-14. Farm wage rates have been rising since the beginning of 1940, but sharply through 1941, and from April to July this year the rise was five times the usual seasonal advance. Highest wages are being paid in the Pacific, Mountain, and New England States; lowest in the East South Central and South Atlantic.

The supply of experienced farm labor is the smallest in 32 years of

Government record. The total number of persons employed on farms is about the same as in 1941, but much

Index Numbers of Prices Received and Paid by Farmers

Year and month	Prices received	Prices paid interest and taxes	Buying power of farm products
1941			
January	104	128	81
February	103	128	80
March	103	129	80
April	110	129	85
May	112	130	86
June	118	132	89
July	125	133	94
August	131	136	96
September	139	138	101
October	139	141	99
November	135	143	94
December	143	143	100
1942			
January	149	146	102
February	145	147	99
March	146	150	97
April	150	151	99
May	152	152	100
June	151	152	99
July	154	152	101

¹ Ratio of prices received to prices paid, interest and taxes.

of it consists of inexperienced help. Even so, high records of farm production are being established this year as every mechanical aid and short cut are being used to attain wartime food production goals. Probability is that total agricultural production this year will be 9 percent larger than in 1941, and 25 percent larger than the 1935-39 average.

SERVICES: No Ceiling

Charges for services rendered on a farm in connection with the planting, cultivating or harvesting of crops, the raising of livestock or poultry, or their preparation for market have been freed from price ceiling by the Office of Price Administration. Farm services excepted from price regulation are primarily seasonal services. Many were not performed in March, the base pricing period, and many others are services customarily performed by one farmer for another.

Maximum price regulations still apply, however, to services performed by

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.]

	5-year average, August 1909 July 1914	July average 1910-14	July 1911	June 1942	July 1942	Parity price July 1942
Wheat (bushel)	88.4	86.2	85.6	95.7	94.6	134.4
Corn (bushel)	64.2	70.1	69.6	81.9	83.1	97.6
Oats (bushel)	39.9	40.9	32.7	46.5	43.9	60.6
Rice (bushel)	81.3		111.0	171.1	169.5	123.6
Cotton (pound)	12.4	12.7	14.32	18.26	18.45	18.85
Potatoes (bushel)	69.7	81.5	73.9	111.1	126.8	108.1
Hay (ton)	11.87	11.78	7.66	10.00	9.05	18.04
Peanuts (pound)	4.8	5.1	4.16	5.51	5.59	7.30
Apples (bushel)	96	17.86	95	1.66	1.52	1.46
Hogs (hundredweight)	7.27	17.35	10.32	13.39	13.78	11.05
Beef cattle (hundredweight)	6.42	15.54	18.73	10.75	10.79	8.24
Veal calves (hundredweight)	6.75	16.75	10.23	12.43	12.56	10.26
Sheep (hundredweight)	4.53	14.60	14.69	5.65	5.53	6.89
Lambs (hundredweight)	5.88	16.12	19.47	11.99	11.82	8.94
Butterfat (pound)	26.3	23.5	36.6	37.4	37.5	37.4
Milk, wholesale (100 pound)	1.60	1.38	1.216	1.35	2.40	2.26
Milk, retail (quart)	6.8	6.8	10.7	11.7	11.7	16.3
Chickens (pound)	11.4	12.2	16.8	18.5	18.7	17.3
Eggs (dozen)	21.5	16.7	26.6	27.4	29.5	29.4
Wool (pound)	18.3	17.5	36.1	39.7	39.2	27.8
Tobacco: ⁴						
Maryland types 32	22.9		35.0	30.0	31.0	21.8

¹ Revised.

² Post-war base.

³ Adjusted for seasonality.

⁴ Retailed by farmers directly to consumers.

⁵ Base price crop years 1919-29.

commercial operators off a farm. Thus, price ceilings apply to the butchering of livestock at a commercial plant not located on a farm and to the ginning of cotton and the grinding or milling of grain performed by commercial operators off a farm. Ceilings apply also to rates for trucking farm products, warehousing charges, and fees of tobacco auctioneers. Services performed on farm buildings—such as re-roofing a barn, the repair of plumbing in a farm house, or the repair of farm machinery, are all subject to price ceilings.

Examples of the services excepted when performed on a farm are: Plowing, discing, planting, drilling, cultivating, fertilizing, spraying, dusting, fumigating farm crops, baiting, treating seed, cleaning seed, butchering, threshing, combining, baling hay or straw, husking corn, silo filling, shredding, shelling corn, cane milling, buzzing wood, saw milling, clover hulling, crushing limestone, cattle clipping, sheep shearing, dipping, pruning and grafting, tiling, ditching, terracing, dam building, potato digging, peanut digging and picking, cotton picking, mowing, binding, cutting, grinding hay and grain, contract crew work, and contract feeding.

FEED SUPPLY: Ample

The supply of feed grains will be ample for 1942-43 requirements, but the carryover at the end of the year will be the smallest since 1937. In 1941-42 the supply of 4 feed grains (corn, oats, barley, and grain sorghums) totaled 130 million tons, domestic disappearance 110 million tons. In 1942-43 the supply is expected to total 131 million tons and domestic disappearance may be 121 million tons. Supplementing the 1942-43 supply, however, will be the quantities of wheat sold under Government wheat feed programs; in addition, the supply of high-protein feeds may total 7.5 million tons, compared with 5.8 million in 1941-42.

The fact is, of course, that production of feed grains this year will be below 1942-43 feeding requirements, and that the Nation's feed granary reserves must be drawn upon for the difference. This granary, carrying 500 million to 700 million bushels of reserve corn in recent years, may be drawn upon to the extent of 200 million to 300 million bushels during the coming year. This would leave a carry-over little larger than in the years prior to the creation of the Ever-Normal Granary.

Qualification, however, is that this year's corn crop is still in the making; it may be more—it may be less—than August indications. Soil moisture is good to carry the crop through maturity; biggest hurdle ahead is frost time. * * * Prices of all feeds will probably average higher this fall and winter than last.

HOGS: Big Volume

Tag end of last fall's pigs is coming to market now; hog marketings will continue seasonally small through September (but in bigger volume than last year), then the big movement of this year's spring crop will get underway and mount to a new all-time high peak of marketings next winter.

The spring crop of 62 million head was 25 percent bigger this year than last, and the volume of marketings next fall and winter will heavily tax transportation and processing facilities. Packers large and small will have all the hogs they can conveniently handle. Meanwhile, farmers are being urged to fatten early spring pigs as rapidly as possible to help prevent a market glut in early winter, and to carry late pigs beyond the December-January peak of marketings.

Of the 62 million pigs this spring, 47 million are in the Corn Belt, as compared with 38 million in this region last year. Of the Corn Belt total, 80 million are in the Western Corn Belt as compared with 24 million last year, and 17 million in the Eastern Corn

Belt as compared with 14 million last year. The number in the Western Corn Belt is little larger now than the average of predrought years 1924-33.

CATTLE: Shifts

The cattle industry is a striking illustration of the way in which this global war is changing normal patterns of agricultural production and distribution. Although the number of cattle on farms and ranches is the largest on record, it is likely that proportionately fewer of these cattle will be long-fed this fall and winter than in normal times. Shipments of stocker and feeder cattle into the Corn Belt bulked about as large during the first 6 months this year as last, but most of these cattle and the cattle to be shipped to the feed lots during the remainder of 1942 will probably be short-fed.

Meanwhile, increasing military requirements draw heavily upon range cattle in good flesh, and inspected cattle slaughter sets new high records for this time of year. Piecewise the lower grades of slaughter cattle yield about as much as the higher grades at this time last year. BAE sees a "good outlook" for prices of range cattle to be marketed this fall, says that the general level of prices of feeder and grass-fat cattle is expected to continue substantially higher than in the last half of 1941, when prices for such cattle were the highest in over 10 years.

LAMBS: Outlook

Farms and ranches began this year with more than 49 million head of stock sheep—slightly more than at the beginning of 1941. The increase suggested the possibility of a larger lamb crop this year than last, but adverse weather intervened at shearing and lambing time, and a smaller number of lambs per 100 ewes was saved in the Western Sheep States. Net is that the 1942 lamb crop totals 32.3 million head, as compared with 32.9 million in 1941 when the crop was the largest in 18 years of Government record.

BAE reported in July that contracting of western lambs for late summer and fall delivery has been rather limited at prices averaging around \$10 to \$11 per 100 pounds for lambs in feeder condition. This is about \$1 higher than contract prices last summer, but market prices for slaughter were reported at \$3 higher. Conclusion is that price relationships are more favorable for lamb feeders this year than last.

OPA announced on August 1 maximum wholesale and retail price ceilings on lamb, for a 60-day period, at the highest prices charged during the last week in July.

DAIRYING: Increase

Dairy production continues to make good reading for us, bad for the Axis as 4.5 million dairy herds the country over break old records of output. These herds are larger this year than last, will be still larger in 1943. Milk flow in 1943 may total 125 billion pounds. This compares with 120 billion in 1942, with 115 billion in 1941. One hundred twenty-five billion pounds next year should provide adequately for military and Lend-Lease needs, and ample supplies for civilian use.

Government stores of evaporated milk and cheese are large (much of it earmarked for Lend-Lease), major emphasis now is being put upon increased production of butter and spray process dry skim milk. A new schedule of prices on Government purchases was announced last month: Price of evaporated milk (export cases strapped) per case was dropped from \$3.20 to \$3.10, and the price of roller process dry skim milk reduced from 12 cents per pound to 11.5 cents. Price of spray process dry skim milk was increased from 13.5 cents per pound to 14 cents, price of butter (92 score at Chicago) was upped from the market price of 37½ cents to 39 cents, and price of cheese (No. 1 Wisconsin cheese exchange, per pound) from 20.25 cents to 21 cents.

Effects of these price adjustments will vary somewhat by areas, but in general and based on average conditions they are expected to increase the return to farmers producing for butter and roller skim manufactured outlets about 2 cents per hundredweight; butter and spray skim outlets about 10 cents; butter and casein outlets about 6 cents; butter and animal feed powder outlets about 6 cents; cheese outlets about 8 cents; evaporated a decline of about 10 cents, provided there is no change in manufacturer margins.

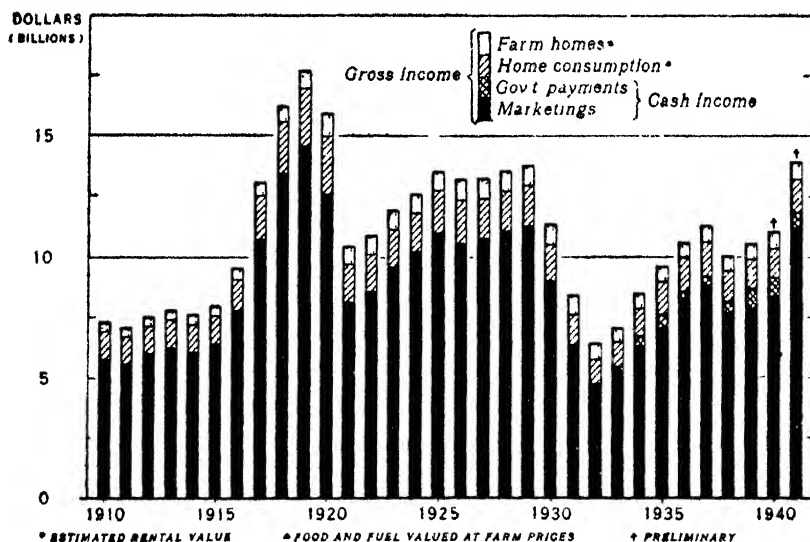
POULTRY: Flocks

Farmers are expanding laying flocks, making ready for the seasonal rise in production of eggs next fall in anticipation of continued good markets. By January 1 next the total number of

layers on farms will likely be 5 to 10 percent larger than on January 1 last. This means larger egg production in 1943, but probably by a smaller quantity than in 1942 over 1941. Big factor, of course, will be feed costs in relation to egg prices; another, the availability of production facilities.

Meanwhile, farm marketings of chickens are topping—and at higher prices—last year's volume. Both consumer demand and storage demand are strong. Output of chicks by commercial hatcheries was 7 percent smaller this June than last, and the number of eggs set in June was 21 percent smaller than the total for June last year. But advance orders for chicks in broiler areas were considerably larger this July 1 than last. Farm production of eggs totaled 29 billion during the first 6 months of 1942 compared with 25 billion during the first half of 1941.

GROSS AND CASH FARM INCOME, UNITED STATES, 1910-41



Sharp advances in prices of most farm products, with some increase in production, raised gross farm income in 1941 to the highest level since 1920. Higher prices increased moderately the value of food, rent, and fuel which the farm provides for family living. Government payments were smaller than in 1940, but the sharp advances in prices of products resulted in a marked increase in cash income. Gross income in 1942 may be close to the all-time high of 17.7 billion dollars in 1919.

FATS, OILS: Record

Evidence accumulates of high record domestic production of fats and oils this year and next. Even so, reserves will be heavily drawn upon if civilian consumption is to be maintained at the high volume of recent years, after meeting requirements for Lend-Lease export and military uses. In short, the increased domestic production this year does not offset entirely our reduced imports and increased exports.

Production of lard is expected to total 2,650 million pounds this year, or about 350 million pounds more than in 1941. Production could be pushed up an additional 100 million pounds by a larger "take-off" of fat. Production in 1943 should exceed 3,000 million pounds and set an all-time high record for this country. But more than 1 billion pounds of lard will be required for Lend-Lease alone in 1942-43.

Big crops of soybeans, peanuts and flaxseed promise to yield a record domestic production of vegetable oils. Adding cottonseed oil, the crush from this year's oil crops is expected to total 3,750 million pounds, against 2,600 million from the 1941 oil crops. * * * On still another sector, the yield of inedible tallow and greases is expected to set a high mark of 2.0 billion pounds this year, as contrasted with 1.5 billion in 1941.

COTTON: Increase

Cotton growers have 24 million acres in cultivation this year, compared with 23 million in 1941. Acreage is larger in all States except Georgia, Alabama, and Florida, where considerable acreages normally planted to cotton have been planted to peanuts instead. With average abandonment this year, the cotton area for harvest will total 23.5 million acres as contrasted with 22.2 million in 1941. Crop forecast is 13 million bales compared with 11 million bales in 1941. * * * Meanwhile, cotton consumption continues to in-

crease in response to wartime needs for goods, the total during 1941-42 exceeding 11 million bales. Consumption in 1942-43 may total 12 million bales. Carry-over is smaller this year than last.

WINTER LEGUMES: Seeding

With twice the 1941 supply of the principal winter legume seed in prospect for this year, the Department of Agriculture urges farmers in Southern and Middle Atlantic States to increase seedings of winter legumes this fall as a means of maintaining the productive strength of their farmlands for war production. The seedings are needed to replace applications of nitrogen fertilizer that will be reduced this year because large quantities of nitrates are being used in munitions manufacture. Growing of winter legumes—mainly vetches and winter peas—is recognized as one of the best methods of restoring productive vigor to the soil. For the seeding of winter legumes, cooperating farmers can earn AAA payments which practically cover the cost of the seed.

FRUITS: Good Crops

Fruit crops may bulk a little smaller this year than last, but the Crop Board said last month that no exceedingly short crops are in prospect except possibly of California dried prunes. Indicated production of peaches, pears, grapes, cherries, and California plums was above average, but short of last year's large production with the exception of cherries and California plums. The apricot crop, and the combined production of plums and prunes in the Northwest will be larger this season than last, but smaller than average. The condition of commercial apples was the same this July 1 as last, but above average. Oranges and grapefruit were in better condition this July 1 than last.

Department of Agriculture announced higher prices to West Coast producers selling natural condition

dried apricots and pears to the Agricultural Marketing Administration. Average for dried apricots is \$380 per ton; dried pears, \$260 per ton. These averages are about \$40 per ton for each fruit over prices announced June 20.

VEGETABLES: Increase

Total acreage of all vegetables for fresh market is little larger this year than last, but yields to date have been exceptionally good, and total volume of outturn has been considerably larger than in 1941. Prices of fresh vegetables have been higher this

summer than last, and will likely continue higher except for crops in especially abundant supply—such as snap beans, onions, and tomatoes.

The 1942 canned pack of major vegetables will be the largest on record, and unusually large quantities of vegetables will be frozen-packed this year. The quantities of vegetables being dehydrated is limited only by the capacity of drying plants. Dehydrated foods being bought in increasing quantities for military use and Lend-Lease export include fruits, vegetables, soup, eggs, milk, meat.

FRANK GEORGE.

The Wealth of India

INDIA is a subcontinent of Asia, shaped like a battered triangle, the northern part entirely landlocked and the southern bounded on the west and east by the Indian Ocean and the Bay of Bengal, respectively. The base of the triangle stretches eastward from the Iranian border to the western frontier of Burma, over which the Japanese now stand guard. From north to south, India is 2,000 miles long and from east to west 2,500 miles wide. The total area is estimated at 1,578,000 square miles.

Into this area, which is about half the size of the United States, there is crowded a population estimated in 1941 at 389 millions. It is a fast-growing population, as indicated by an increase of some 60 millions in the past two decades. In any evaluation of the material wealth of India the population factor is of great importance. A mere enumeration of the country's wealth in terms of agricultural and mineral resources makes for very impressive reading, but it is considerably less so when the resources are related to the needs of so huge a population.

THE wealth of India is essentially agricultural. Much has been said in recent years about the industrialization of India, but the fact is that now more so than in the past—the country is predominantly rural. It has been estimated that agriculture provides, directly or indirectly, the livelihood of 89 percent of the people. The remainder derive their income from industry, which has failed to absorb any of the excess agricultural population. Indeed, the proportion of farm population to the total increased from 61 in 1891 to 73 in 1931. This is the reverse of the process taking place in the Western World and in the economically more progressive countries of the East, and it thereby underlines the importance of agriculture in India's economy.

The agricultural resources of India consist of some 320 million acres of cultivated land. Inasmuch as the problem of securing adequate food supplies for India's 400 millions is the most significant, four-fifths, or 250 million acres, of all the cultivated land is under food crops; the remainder is devoted to industrial or cash crops.

RICE is the most essential food crop of India. The diet of approximately 70 percent of the population consists mainly of rice. India has the world's largest acreage under rice (72 million acres) and is second only to China as a rice producer (57 billion pounds). These figures are formidable indeed, but it must be noted that in the past two decades output actually declined by 8 percent as against an 18 percent rise in population. The decline in output is caused by stationary or slowly declining yields. The average yield per acre in the past two decades ranged from 29 bushels (1922-26) to 26 bushels (1937-41) as against 68 and 75 bushels in Japan. India, therefore, does not produce enough rice to satisfy its requirements, and the per capita consumption has declined from 205 to 162 pounds. Even on this basis of reduced consumption India must import from 6 to 8 percent of its total rice supply from Burma. With the Japanese occupation of Burma, India's rice-supply situation has been weakened still further.

Wheat is India's second important crop, the area averaging 35 million acres and output about 375 million bushels. As in the case of rice, in recent years there has been little increase in acreage and output of wheat. The per capita consumption (60 pounds) has remained practically unchanged, but mainly through diversion of what was formerly an exportable surplus into domestic channels of consumption.

In addition to the two premier crops, India is a large producer of a variety of millets (more than 60 million acres), barley, corn, and legumes. India is the world's greatest sugarcane producer. There are nearly 4 million acres under sugarcane, with an output of 5 million tons of sugar, but of low quality. In terms of volume, India is the world's largest tobacco producer, with 1,497,000 acres growing 1,375 million pounds.

ANOTHER important source of India's agricultural wealth is its livestock which, including sheep and goats, is estimated at 310 million head. Because of the many and indispensable functions assigned to livestock by Indian peasants—"the cow and the bullock have on their patient back the whole structure of Indian agriculture"—their economy is dependent upon the quality of this livestock. The fact is, however, that the livestock is of a poor quality indeed; it is small-sized, inefficient, and subject to many contagious diseases. The gradual expansion of the cultivated area at the expense of pastures in the congested areas of India has adversely affected animal husbandry. It is contended that the fodder available in India is sufficient for only two-fifths of the livestock. The large number of livestock in India places the country in the position of the world's leading producer of hides and skins, both raw and half tanned. The output is estimated at 20 million cattle and almost 6 million buffalo hides, 28 million goat and kid skins, and 19 million sheep and lamb skins.

India is one of the largest producers of oilseeds, oil cakes, and oils, having planted an area of 23 million acres under a variety of oil-bearing seeds. Chief among these is a yearly output of 3 million tons of peanuts, and a yearly output of 340,000 tons of peanut oil. Linseed, castor-beans, rapeseed and sesamum are the other important oilseeds. Approximately a million tons of oil extracted from these seeds is exported. India is perhaps the original home of the cotton plant and has been for many years the second largest cotton producer, with an output of 4.5 million bales per year. Despite attempts to develop substitute materials, jute continues to be the cheapest packing cloth in the world. In this field India enjoys the virtual monopoly, based on an annual output of 9 million bales.

DESPITE the agricultural character of India, it differs considerably from such agricultural countries as the Netherlands Indies and Malaya. This is because of India's variety of mineral resources, not possessed by the other two countries. India represents a vast potential industrial area, with an abundant labor supply and unlimited market; but these very factors, associated with low spendable income, inefficiency of labor, lack of capital, and former reluctance on the part of the colonial administration to encourage heavy industries, have so far handicapped the country's industrial development. Yet India has large resources upon which industrialization could feed itself, once the handicaps are lessened or eliminated altogether.

India's mineral resources include enormous easily accessible supplies of high-grade iron ore. The reserves are estimated at 3 billion tons, and the iron content of the ore averages 64 percent. Coal, coking coal, and manganese—all basic materials in iron and steel making—are available in abundance. Estimates of the coal resources vary from 36 to 60 billion tons, of which 5 billion tons is of good quality and easily workable. After Russia, India is the largest producer (over 1 million tons) of high-grade manganese. The country is the world's largest producer of mica, the other chief producers being the United States and Canada. India's proportion, by value, of the total output of these three countries is over 80 percent. India is one of the world's important producers of chromite, an essential mineral used in the manufacture of stainless steel and of chromesteel for armor plate for warships. Bauxite deposits of considerable extent and of good quality for the manufacture of aluminum, as well as large potential hydroelectric power, must be added to the non-agricultural resources of India.

BY far the greater part of the mineral wealth of India is yet in the making. There is altogether too great a gap between the mineral resources of India and their actual utilization. With few exceptions, notably that of the cotton-textile industry, India's industrial development has proceeded at an extremely slow pace. In 1934-38 India mined only 24 million tons of coal annually, 2½ million tons of iron ore, 339,000 tons of copper ore, and 8,000 tons of bauxite, while the value of the entire mineral output averaged 65 million dollars. Even under the stimulus of war production India's output of finished steel in 1941 amounted to only 1,250,000 tons.

It is unquestionable, however, that the enormous wartime demands that rise daily have created an urgent need for intensified industrial development of India. It involves also a basic and positive change in the attitude of Great Britain regarding a rapid industrialization of India. This, in conjunction with the material and technical aid received from the United States, may find India in a position to translate at an accelerated rate the country's potential resources into actual wealth.

Such a development is all the more important because not all is well with India's agriculture, now its principal source of wealth. The fact cannot be overlooked that the 320 million acres of cultivated land do not provide all the people with a quantity—let alone quality—of food necessary to meet the minimum requirements of the unpretentious diet prevailing in the Far East or southeastern Asia.

THERE is nothing inherent in an Indian peasant that prevents him from becoming an efficient producer of food and other farm products and from realizing all the benefits that follow. But the institutional milieu within which the peasant lives and works militates against such changes. Lack

of education, very limited application of agricultural science, and a land-tenure system that burdens tens of millions of Indian peasants, inheritance laws that result in fragmentation of holdings and, what is perhaps most important, a rapid increase in population pressing ever harder against the available resources—all these combine to make output low, both per unit of land and per man. The net result is not enough agricultural wealth to go around, which in practice spells widespread poverty and disease.

No progress in agriculture or in industrialization can appreciably increase the wealth of the people if the growth of population in India continues at the

rate of the past two decades, nullifying whatever material advantage is gained. It is well to remember in this connection the conclusion reached by the Royal Commission on Agriculture in India that everything "which we have advocated for the material advancement of the people will merely postpone the effects of the growing pressure of the population on the soil. No lasting improvement in the standard of living of the great mass of the population can possibly be attained if every enhancement in the purchasing power of the cultivator is to be followed by a proportionate increase of the population."

W. I. ADJINSKY

Office of Foreign Agricultural Relations

Ready For Income Tax Returns?

MORE farm people than ever before will be filing Federal income tax returns in March 1943. Total farm income in 1942 is heading for a new high, and personal exemptions are likely to be lower than those in effect last year. Many farmers must expect to file a return even though they have no taxable net income. An income tax return calls for provable statements of facts. Supporting evidence may take a number of forms, including bills of sale, receipts for expenditures, and memoranda of receipts and expenses.

The basic principles to be followed in computing taxable net income are fairly simple, although in individual cases there may be complications. The easiest way to meet the requirements is to have a written record of business dealings as they occurred, including amounts received from sales and services, and amounts paid out. The content is far more important than the form. For farmers who have not "kept books," but who expect to have enough income to require reporting, now is not too soon to start developing a record for use next winter.

FARMERS who have kept no formal books and who are reporting for the first time must report on a "cash" basis. They must report actual receipts and expenses in cash for the farm business. In addition, they must develop a depreciation plan covering farm buildings, improvements, equipment, and other items representing capital investment.

"Income" means *all cash* received during the calendar year plus the cash equivalent of anything received in exchange for farm products. In case of question, the best evidence is a chronological record of receipts, especially if supported by statements such as come with milk or egg checks, and the like. Memory alone is usually a poor basis for an accurate report. Starting in midseason, bank deposit slips, bank passbooks or statements, sales returns, acknowledgments of deliveries, in fact almost anything authentic will help in fixing the amount of income for the earlier part of the year. In the case of receipts from sale of produce or animals raised, the entire amount is treated as income. In the case of receipts from the sale

of produce or animals previously bought, only the difference between the purchase price and the sale price is part of the gross income regardless of how long they were kept on the farm. Receipts from sales of cordwood, posts, lumber, gravel, Government payments, and the like, are also part of the gross farm income.

IN general, a farmer is entitled to deduct as necessary expenses from gross income all amounts actually expended in carrying on the business, except those which represent capital investment. Here again the only practical way to be sure of the amount and nature of expenses is to set them down in writing as they occur. Receipted bills and canceled checks can be used to substantiate the amounts.

Since the farm business and the daily life of the farm family are closely related, it often is difficult to say which expenses are fully farm, which are fully personal, and how those which are both should be divided. The division often may have to be arbitrary, but it must be reasonable and consistent with the facts. In a few cases the division is of little practical significance. For example, property taxes levied against all the farm property except the dwelling are deductible from the farm business income as expense, whereas taxes levied against the dwelling are deductible from the *personal* gross income. Interest paid on mortgage and other debt is deductible, either as a business expense or as a personal deduction, depending on the circumstances. Automobile expense is deductible from gross farm income only in proportion to the use of the automobile in the farm business. Other items can be treated as business or as personal expense to the extent that the facts warrant.

THE allowable deduction for depreciation of farm buildings (except dwelling), improvements, machinery and equipment, work stock,

and breeding stock is the item likely to cause greatest confusion. The allowance for depreciation permits a deduction annually (as an expense) of a sum sufficient to cover the value used up in the productive process that year. Consider for example a machine that cost \$110 new, estimated to have a useful life of 10 years and a scrap value of \$10. The value to be used up over 10 years may be divided in several ways, but in the absence of a compelling reason for some other distribution, \$10 a year for 10 years is considered most satisfactory to most people. Every durable item of capital equipment is set up in similar fashion. The amount claimed can be adjusted as facts indicate; but the total may not in any case exceed the cost less salvage value, no matter how long a machine may stay in use.

Computing the depreciation allowance for a farm business requires a list of depreciable property with information as to the date of acquisition, cost, depreciated value at beginning of year, estimated useful life remaining, and estimated scrap value. Once prepared, the list of property is continued year after year by removing items disposed of or scrapped and by adding newly acquired items.

The gross farm income less expenses paid out and depreciation allowed represents the "net farm profit." This is one item of the farmer's personal income. Personal net income is arrived at by adding other personal income such as nonfarm earnings and interest received, and then deducting such items as contributions and personal taxes and interest paid. All this must be shown on the return filed.

Besides its value in preparing an income tax return, the keeping of records is useful in analyzing the financial results of farm operations. Business judgment developed by using farm business records has helped to increase the income of many farmers.

GERHARD J. ISAAC.
S. W. MENDUM.¹

National Food Supply

TOTAL food production in 1942 is setting an all-time high record—about 9 percent more than in 1941, and 25 percent larger than the average for the five years 1935–39. BAE reported this month larger food grain crops in prospect this year than last. Truck crops and sugar crops are substantially larger this year than in 1941. Most of the increase in food production this year over last is in truck crops, sugar crops, meat animals, and live-stock products.

Our food requirements also are considerably larger this year than last—for civilian and military use, and Lend-Lease export. Men-at-arms require more food than civilians, and as among civilians the men engaged in manual production require more than do office workers. Records show too that food consumption increases as the size of the pocketbook increases; many pocketbooks are larger this year than last.

Altogether, the BAE sums up that while the increased production of food this year assures an over-all supply for civilian consumption about as large as in 1941, the supplies of some foods may

be smaller by reason of the extraordinary wartime requirements for the military and Lend-Lease. But there are offsets.

Civilian supplies of canned fruits and vegetables are smaller this year than last, but there are larger supplies of homegrown and commercial fresh vegetables, and considerably larger quantities of vegetables are being home-packed. * * * Increased production of dairy products this year is calculated to meet wartime requirements and normal civilian needs, and supplies of eggs are being maintained by means of the largest total output on record.

Altogether, the Bureau says that per capita civilian consumption of cereals, lamb and mutton, poultry, dairy products, and most fresh vegetables may be as large or larger in 1942 than in 1941. But that the per capita consumption of sugar, fresh fruits, canned and dried fruits, beef, pork, and lard may be smaller. Per capita consumption of edible fats and oils (with the possible exception of lard) may be as large as in 1941.

F. G.

Our Changing Food Consumption¹

THE average annual consumption of food over the last three decades has been remarkably stable with relatively small variations as between years in terms of the total. In the accompanying table, the total is expressed in terms of total weight of food moving through the retail market or its equivalent, but substantially the same conclusions would be reached if the total were expressed in terms of calories or other nutritional measures such as vitamin or mineral content.

¹ Excerpts from address by Oris V. Wells, Bureau of Agricultural Economics, before the American Home Economics Association, Boston, Mass., June 22, 1942.

There has been a down trend in the consumption of potatoes and cereal products—especially flour and cornmeal. The consumption of wheat flour dropped 24 pounds or about 12 percent between 1916–17 and 1918–19, failed to show any significant increase following World War I, again declined during the period 1930 to 1935, and at the present time is only about 75 percent of what it was prior to World War I. The consumption of cornmeal has also been declining, and at present is only about 40 percent of what it was during 1909–16. Our data also indicate that there is a slow down trend in the consumption of potatoes, with

current consumption down to about 80 percent of the level which existed prior to World War I.

The consumption of sugar increased about 20 pounds or 25 percent between 1920 and 1925 and then continued at 100 pounds or more per capita through 1941. This increase in sugar consumption has often been interpreted as an offsetting shift to the decrease in cereal and potato consumption and also reflects the result of rising incomes and the maintenance of standards of living at a very high level following World War I.

THE consumption of meat and eggs has remained stable, while some increase in the consumption of beans, peas, and nuts is indicated. True, the per capita consumption of eggs and meat, including poultry and fish, has fluctuated some as between the several periods, but there is no significant

trend. Such data as are available indicate that the consumption of dry field beans increased from 6.2 pounds per capita in 1909-16 to 8.8 pounds per capita in 1937-41.

A steady increase is indicated for the consumption of the manufactured dairy products—condensed and evaporated milk, cheese, and ice cream—from 1909-16, with some increase in the consumption of fluid milk and cream following World War I and a further slight increase in 1927-31 as compared with 1922-26, and again in 1937-40 as compared with 1932-36. Butter consumption has remained stable, with the 1932-41 average almost identical with the per capita consumption for 1909-16.

The consumption of fresh fruit has remained stable, but with a considerable shift away from apples to citrus fruit. The consumption of apples is currently running at about 65 percent,

Estimated Average Annual Per Capita Consumption of Food in the United States, 1909-41¹

Item	1909-16	1917-21	1922-26	1927-31	1932-36	1937-41
Dairy products²	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
Fluid milk and cream ³	248.8	240.6	264.4	272.8	260.0	274.2
Evaporated milk, cheese, ice cream	13.9	19.9	22.8	25.1	25.6	33.6
Meats, poultry, fish ⁴	142.8	135.6	139.8	131.7	131.4	136.6
Eggs	37.2	35.7	39.5	40.9	36.5	37.7
Potatoes, including sweetpotatoes	187.0	170.4	161.9	156.7	158.8	146.9
Beans, peas, and nuts	11.2	13.1	12.0	14.1	15.0	16.0
Fresh fruit						
Citrus	18.2	20.8	27.2	32.3	37.2	54.3
Other	156.0	129.4	140.9	144.4	132.6	144.1
Dried fruit	4.2	5.9	6.0	5.7	5.5	6.2
Canned fruit	4.2	7.9	9.2	13.0	12.5	17.2
Fresh vegetables⁴						
Tomatoes			13.8	13.8	14.7	17.2
Leafy, green, and yellow			51.7	57.6	60.8	69.5
Other	100.0	100.0	36.1	40.1	41.0	47.8
Canned vegetables	13.0	13.4	16.0	18.9	17.9	23.2
Cereal products						
Wheat flour	206.4	180.1	176.0	173.4	156.6	154.0
Other ⁵	77.1	55.6	51.3	49.4	43.3	42.1
Sugar and sirup ⁶	91.0	95.8	115.9	114.4	107.9	113.7
Butter and fats						
Butter	17.4	15.2	17.9	17.7	17.7	17.0
Other ⁷	43.4	43.5	45.5	46.7	44.8	48.4
Coffee, tea, chocolate, and spices	13.2	16.6	16.7	17.4	18.4	21.2
Total⁸	1,385.0	1,318.5	1,366.6	1,386.1	1,344.2	1,420.8

¹ Consumption in terms of estimated weight available for sale in the retail market calculated from statistics of stocks, production, foreign trade, and estimated wastes between the farm and retail market.

² Calculated by taking 80 percent of estimated consumption of whole milk and cream in terms of whole milk.

³ Excluding bacon and salt pork and including an allowance of 14 pounds per capita for fish, 1909-41.

⁴ Consumption per urban inhabitant, since farm-garden production not estimated.

⁵ Buckwheat and rye flour, breakfast cereals, and cornmeal.

⁶ Chiefly cane and beet sugar, with sirup and other sugars accounting for about 13 pounds per capita, 1909-41.

⁷ Salad dressing, margarine, vegetable oil cooking compounds, bacon and salt pork, and lard.

⁸ Simple sum of items without correction for some duplication between sugar and ice cream and canned fruit.

and the consumption of citrus fruit at about 300 percent, of the level which existed prior to World War I.

THE consumption of vegetables has been increasing during the last two decades, with some slight shift toward the consumption of leafy, green, and yellow vegetables and tomatoes, which has increased about one-half since 1922-26. Such data as we have indicate that the consumption of vegetables was relatively steady from around 1905 through 1925, and that the shifts since then have been in line with the educational recommendations that have been developed from a nutritional standpoint.

An analysis of supplementary data as well as general observation indi-

cates that there has been a marked drift toward types of food and methods of distribution which lessen "the struggle" of food preparation. That is, there has been a steady increase in the packaging of food and the services which grocers and others render in the form of cutting, trimming, slicing, and freezing before actually turning the food over to the consumer. I think this is significant not only in its effect upon the amount of time and effort required in the final preparation of the food in the home, but also in its effect upon the increase in the margin between prices received by farmers and prices paid by consumers during and following World War I and in relation to some of the economies which we may be forced to during World War II.

Big Packs of Canned Foods

NEW high records are being made this year in the production of many canned fruits and vegetables. More than 40 million cases of tomatoes and 38 million cases of peas commodities especially sought as part of the Food-for-Freedom program—will be packed. Big figures are shown also for sweet corn (nearly 27 million cases), tomato juice (27 million cases), green beans (15 million cases), grapefruit juice (14.5 million cases), and peaches (15 million cases). Large commercial packs of fruits and vegetables processed and preserved in other ways—in paper and in glass—are being made.

Probability is that home canning will contribute much to the supply of processed food this year, especially of vegetables glassed from victory gardens. Big packs of small fruits will be put up in homes to the limit of supplies of containers and sugar. The output of farm gardens will bulk larger this year than ever before, making available large quantities of vegetables for home consumption, and a surplus for home canning. These home supplies

should go far toward making available larger supplies of commercial foods for military and Lend-Lease use, and toward cutting less drastically into

Canned Vegetables: Packs of 1940 and 1941, and Estimated 1942¹

Commodity	1940	1941	Estimated 1942 ¹
	1,000 cases of 24's	1,000 cases of 24's	1,000 cases of 24's
Primary			
Asparagus	3,256	3,295	4,200
Beans, green	8,520	11,673	14,700
Beans, wax	1,219	1,689	2,100
Beans, lima	1,992	2,487	2,700
Corn	15,624	26,109	26,900
Peas	25,196	24,724	38,400
Tomatoes	29,533	31,759	10,300
Tomato catsup, paste, and sauce	6,136	6,384	6,800
Vegetable purees	4,500	5,500	5,500
Secondary			
Beets	8,719	7,365	5,578
Carrots	1,435	2,015	2,152
Pimentos	465	400	232
Pumpkin and squash	3,090	3,391	2,657
Spinach	4,980	4,946	7,808
Others (carrots and peas, greens, kraut, okra, soups, succotash, and mixed vegetables)	39,150	44,950	33,301

¹ Estimates subject to change as crop prospects change.

² Estimates of National Canners Association, in actual cases (catsup only in No. 10 tins).

commercial packs for civilian consumption.

THE supply of principal canned fruits and vegetables for civilian use will be smaller this year than last, but larger than pre-war totals. Some fruits and vegetables will not be canned at all this season, but processed in other ways, in an effort to conserve available supplies of tin. The latter-named group includes baked beans, kidney beans, corn on the cob, hominy, kraut juice, rhubarb, mushrooms, apple butter, dried prunes, and some of the fruit juices. As for foods canned, an estimated production of 198 million cases of vegetables (including soups) to be packed this year compares with 200 million in 1937; 107 million cases of fruits and fruit juices compares with 82 million in 1937; 85 million cases of evaporated and condensed milk compares with 45 million cases; 2 billion pounds of meat products compares with 540 million in 1937; and 23 million cases of fish compares with 19 million cases.

Production of dried fruits will be larger this year than last, but smaller quantities will be available for civilian consumption as a result of large Government purchases. Large quantities of dried vegetables—beans, peas, onions, potatoes, and cabbage—also are being bought by the Federal Government; nevertheless, the supply of dried beans and peas for civilian use should be fairly large. The frosted foods industry expects to turn out record packs of many of the standard fruits, vegetables, and other foods this season.

The Bureau of Agricultural Economics issued preliminary estimates last month totaling 2 million acres of commercial truck crops for processing this year, as compared with 1.6 million

Canned Fruits: Packs of 1940 and 1941, and Estimated 1942

Commodity	1940	1941	1942 estimated ¹
	1,000 cases of 24/2½'s	1,000 cases of 24/2½'s	1,000 cases of 24/2½'s
Primary:			
Fruit cocktail.....	4,361	5,107	5,250
Fruit salad.....	601	634	750
Peaches (excluding California freestone)	10,191	12,316	14,000
Pears.....	5,518	6,557	7,000
Fruit puree ²	950	1,200	1,200
Secondary:			
Apples.....	2,058	3,990	3,088
Apple sauce.....	2,002	3,219	3,187
Apricots.....	2,197	4,257	2,500
Berries.....			
Blackberries.....	359	663	359
Blueberries.....	264	481	264
Cranberries.....	1,993	2,593	1,993
Loganberries.....	62	51	62
Raspberries, black.....	144	190	144
Raspberries, red.....	170	149	170
Strawberries.....	140	99	140
Other berries.....	176	172	176
Cherries, R S P.....	2,712	1,707	3,905
Cherries, sweet.....	595	867	893
Citrus salad.....	228	207	207
Grapefruit.....	2,955	2,254	2,000
Peaches, California freestone.....	1,134	2,154	1,071
Plums.....	98	332	49
Prunes.....	1,235	2,012	927

¹ Estimates subject to change as crop prospects change.

² Estimates of National Cannery Association, in actual cases.

Canned Fruit Juices: Packs of 1940 and 1941, and Estimated 1942

Commodity	1940	1941	Estimated 1942 ¹
	1,000 cases of 24/2½'s	1,000 cases of 24/2½'s	1,000 cases of 24/2½'s
Secondary:			
Grapefruit.....	11,600	8,000	14,500
Lemon.....	294	250	147
Orange.....	2,825	2,000	3,531
Blended citrus.....	1,751	1,725	2,189
Fruit nectars.....	1,500	1,650	1,650

¹ Estimates subject to change as crop prospects change.

acres harvested in 1941. These crops include asparagus, lima beans, snap beans, beets, cabbage for kraut, sweet corn, cucumbers for pickles, green peas, pimientos, spinach, and tomatoes.

MAURY NEEDHAM.

Buy War Bonds

SUPPLEMENTAL SWEETS

Supplemental sweetenings are important elements in our sugar supply, equal last year to 1 million tons of raw sugar. Production should be larger this year—possibly 30 percent more—in view of the tight sugar situation and other incentives to greater output of corn sirup and corn sugar, cane sirup, sargo sirup, honey, and maple sirup. The production of sweetenings is a third of the output of all sugar and sweetenings combined in the continental United States.

* * *

Principal sweetenings are corn sirup and corn sugar. Production of corn sirup has been forecast at 150 million gallons for 1942, compared with 109 million in 1941; corn sugar at 750 million pounds compared with 667 million pounds. Before the war, more than half the corn sirup went into confections; a fourth into mixed sirups for pancakes, hot biscuits and the like; most of the remainder into bakery products and beer. Much prewar corn sugar went into non-foods (tanning, rayon industries)—about 40 percent then, only 20 percent now. In 1937, bakeries consumed 23 percent, breweries 19 percent, confectioners 6 percent of the corn sugar. Corn sugar and sirup are produced all year around, as required.

* * *

Honey production slumped in the 1930's because of low prices and drouth; is now back to 1920 figures, climbing from 13 million gallons average in 1934-37 to 17 million in 1940-41 and 21 million estimated for 1942. Prices have risen sharply the last two years. Neatly all honey is used for food. It makes a good sweetener for iced tea if added when tea is hot, later chilled. Production reaches peak when spring flowers bloom, and the bloom was profuse this year.

* * *

Production of cane sirup, sargo sirup, and edible molasses reaches a yearly

high point after fall harvest of the cane and sorghum crops. Cane sirup available in 1942 is indicated at 18.4 million gallons, up from 13.4 million in 1941. Production centers in the lowlands of the South Atlantic and Gulf coast States. Most of the production is in small quantities, except for commercial production in Louisiana and Georgia which is shipped in tank cars to manufacturers who mix it with other sirups and sell under their own trade names.

Sorgo sirup comes from highlands of States flanking the lower Mississippi River, southeastern United States and Texas. Supply for 1942 at 11.7 million gallons is up from 11.3 million last year. Edible molasses, chiefly a by-product of Louisiana sugar-cane, is estimated at 5.4 million gallons this year—double the supply for 1941. The molasses is used as sirup and in recipes for spice cakes, gingerbreads and the like.

* * *

Maple sirup production is estimated at 2.9 million gallons this year, 2.0 million last year, maple sugar production at 657 thousand pounds this year, 387 thousand last year. Most production is in New England and States bordering Great Lakes. Trees are tapped in late winter, early spring when sap begins to rise. Sap is then boiled down into sirup and sugar. The sugar is used to give a maple flavor to candy, ice cream, bakery and other products, and to some extent in the tobacco industry. Tobacco manufacturers also import considerable quantities from Canada.

Homemakers can get many good recipes using supplemental sugars, sirups and molasses from State, Federal home economists. All told, however, production of these sweetenings probably will be only 288 thousand tons greater than last year—equivalent to only a tenth of the expected reduction of 2.5 million tons in consumption of cane and beet sugar.

—FRANKLIN THACKREY

FARM INCOME

Cash income from farm marketings in 1941 (revised to incorporate more complete data on sales of livestock and livestock products) totaled 11,244 million dollars—2,865 million more than in 1940. A similar increase this year would bring the total within 500 million of the all-time high of 14,602 million in 1919. Government payments in 1941 totaled 586 million dollars—180 million less than in 1940. Possibility is that cash income from marketings plus Government payments in 1942 will set a new high record of cash income.

Added to cash income in 1941 is 1,421 million dollars representing the value (at farm prices) of food and fuel retained on farms where grown, and 706 million as the rental value of farm dwellings. Comparable figures for 1940 are 1,233 million for food and fuel, and 665 million as rental value. Gross income (cash from marketings, Government payments, food and fuel and rental value) was 13,957 million dollars in 1941, compared with 11,043 million in 1940. Largest gross on record was 17,710 million in 1919; smallest in the last 32 years was 6,406 in 1932.

Gross Farm Income, United States, 1910-41¹

Year	Cash income from marketings	Government payments	Total cash income	Value of home consumption	Rental value of dwellings	Gross income
	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.	Mil. dol.
1910	6,793	—	6,793	1,177	382	7,352
1911	5,596	—	5,596	1,092	393	7,081
1912	6,017	—	6,017	1,140	404	7,561
1913	6,248	—	6,248	1,153	420	7,821
1914	6,050	—	6,050	1,161	427	7,638
1915	6,403	—	6,403	1,131	434	7,968
1916	7,750	—	7,750	1,309	473	9,532
1917	10,746	—	10,746	1,861	540	13,147
1918	13,461	—	13,461	2,153	618	16,232
1919	14,602	—	14,602	2,395	713	17,710
1920	12,608	—	12,608	2,406	894	15,908
1921	8,150	—	8,150	1,568	760	10,478
1922	8,594	—	8,594	1,556	734	10,883
1923	9,563	—	9,563	1,623	781	11,967
1924	10,221	—	10,221	1,622	790	12,623
1925	10,995	—	10,995	1,781	791	13,567
1926	10,564	—	10,564	1,837	803	13,204
1927	10,756	—	10,756	1,695	800	13,251
1928	11,072	—	11,072	1,617	811	13,500
1929	11,296	—	11,296	1,699	820	13,824
1930	9,021	—	9,021	1,537	830	11,388
1931	6,371	—	6,371	1,253	754	8,378
1932	4,743	—	4,743	1,005	655	6,406
1933	5,314	131	5,445	1,023	587	7,055
1934	6,334	446	6,780	1,090	616	8,486
1935	7,986	573	8,559	1,320	616	9,595
1936	8,367	287	8,654	1,374	615	10,643
1937	8,850	307	9,157	1,410	645	11,275
1938	7,686	452	8,138	1,283	632	10,083
1939	7,877	807	8,684	1,244	636	10,564
1940	8,379	766	9,145	1,245	665	11,043
1941	11,244	586	11,830	1,421	706	13,957

¹ Cash income and value of home consumption of livestock and livestock products have been revised from 1935 to 1939 following the release of 1940 agricultural census enumerations of livestock. Similar revisions in income from crops have not yet been made for this period.

² Preliminary.

New Uses for Cotton

IF THE cotton industry is to hold its position in the future as a major industry, scientific research must be intensive in several major fields. There is need for three lines of research on lint cotton: (1) On the chemical and physical properties of the individual fibers. (2) On the mechanical processing of cotton and its manufacture into various products, and (3) on chemical finishes for cotton products. Most cotton products in use today were developed through trial and error.

New and improved cotton products developed as a result of research work by various organizations in many fields include an inexpensive cement shingle using cotton fabric as a reinforcing membrane, a method of making cotton pile fabrics for automobile and furniture seats, a process by which cotton webbing and resins are used to form felts for industrial use, a way of making disposable towels, wrinkle-resistant finishes, flame-proofing and waterproofing treatments to increase serviceability of cotton products.

THE Southern Regional Research Laboratory has contributed directly to the war effort in its cotton research in the development of means for cutting cotton to uniformly short lengths so it can be used with existing commercial equipment to supplement linters for making smokeless powder, and in providing a list of effective treatments for protecting sandbag fabrics from attack by soil micro-organisms.

Other laboratory cotton research objectives of importance are: plastic coated or impregnated fabrics for replacing rubberized fabrics; an unlined cotton fire hose to replace linen hose of the same type; improved mesh fab-

rics for use as a base for nonshatterable transparent plastic substitutes for window glass; and the development of cotton products to replace those made from certain imported fibers which are difficult or impossible to obtain.

Research efforts on products of cottonseed include development of adhesives for plywood, paper-coating material to supplement casein, synthetic wool-like fibers, modified cottonseed oil to replace olive oil in the textile industry and palm oil in the tinplate industry and to replace certain imported waxes.

D. F. J. LYNCH,
*Director, Southern Regional
Cotton Laboratory.*

Parity Prices: How They Are Calculated

THE original definition of the parity principle in the Agricultural Adjustment Act of 1933 declared that it was the policy of Congress, among other things, to "reestablish prices to farmers at a level that will give agricultural commodities a purchasing power with respect to articles that farmers buy, equivalent to the purchasing power of agricultural commodities in the base period. The base period in the case of all agricultural commodities except tobacco shall be the prewar period, August 1909-July 1914. In the case of tobacco, the base period shall be the postwar period, August 1919-July 1929."

While this formula has been amended and reenacted several times since 1933, it has not been essentially changed except that provision has been made for using August 1919-July 1929 as the base period for potatoes and commodities for which satisfactory data are not available for 1909-14, and allowances for interest payments per acre on farm indebtedness secured by real estate and tax payments per acre on farm real estate have been added to the purchasing power calculations for all

commodities for which the base period is 1909-14. In addition, the base period for Burley and flue-cured tobacco has been shifted to August 1934-July 1939.

This formula defines a relationship or exchange ratio between prices paid by farmers generally and prices received. It applies only to those items which the farmer buys and for which prices and rates can be rather easily determined, and to those items which the farmer sells for which prices can also be rather easily determined. It is not a cost-of-production or standard-of-living formula except to the extent that such a ratio or exchange relationship would give farmers prices and farm families incomes that would have the same relative purchasing power when compared with nonagricultural prices and the incomes of nonfarm families as existed in the base period.

THE steps or methods used in calculating parity prices for agricultural commodities are:

1. A base price is determined. Where satisfactory data are available this is done by averaging the prices

received by farmers for the 60 months beginning August 1909 and ending July 1914. The average price of cotton during this period, for example, was 12.4 cents a pound, while corn averaged 64.2 cents a bushel and wheat averaged 88.4 cents a bushel. The base prices for tobacco and for a considerable number of fruits and vegetables are averages of the season average prices for the marketing seasons falling within the 120 months August 1919-July 1929, or the 60 months August 1934-July 1939.

2. An index of prices paid, including taxes on real estate and interest paid, is calculated. To begin with, the prices of 86 items used in family living and 88 items used in farm production are collected. These items include clothing; household supplies; food; furniture and furnishings; building materials, automobiles, trucks, tractors, gas, oil, and tires; feed; farm machinery; fertilizer, general equipment and supplies; and seed. The estimated quantity of each commodity used by farmers is used to combine these prices into a simple index, which also includes the appropriate allowances for taxes and interest. This procedure gives an over-all index of 152 for June 15, 1942, which means that farm commodity prices would need to be 152 percent of the prices prevailing in 1909-14 in order to have the same per unit purchasing power as in 1909-14.

3. The third step in calculating parity prices is to adjust the base period prices by the index of prices paid, interest, and taxes. That is, the base period prices are multiplied by 1.52 to calculate the parity prices for June 15, 1942. The parity price for cotton, for example, is 1.52 times 12.4 cents, or 18.85 cents a pound; the parity price for corn is 1.52 times 64.2 cents, or 97.6 cents a bushel; and the parity price for wheat is 1.52 times 88.4 cents, or 134.4 cents a bushel.

PARITY prices, of course, change as the index of prices paid, interest, and taxes changes—that is, parity is a

relative rather than fixed price concept. In fact, the parity index has been rising steadily since last spring. The index of prices paid, interest, and taxes was 130 for May 15, 1941, as compared with 152 for May 15, 1942, and 152 for June 15, 1942. This index, it should be noted, does not include any allowance for sums spent for farm wages; while the effect of freight rates is automatically covered by using prices paid by farmers in the local market.

For some commodities which have only recently come into general use or for which satisfactory earlier data are not available, the base period is August 1919-July 1929, or that part thereof for which satisfactory statistics are available; while for Burley and flue-cured tobacco the base period is August 1934-July 1939. Parity for these commodities is calculated in exactly the same manner as for other commodities, except that allowances for interest and taxes are not included. The index of prices paid by farmers was 95 based on August 1919-July 1929 and 122 based on August 1934-July 1939 as of June 15, 1942. Parity prices, as well as prices received by farmers, are published every month by the Department in its Midmonth Local Market Price Report.

PARITY prices are calculated in terms of prices received by farmers in the local markets in which they ordinarily sell. This means that parity prices apply to the average of all classes and grades of the commodity as sold by all farmers in the United States, except as otherwise specified. Fruits and vegetables for fresh use and for processing are usually considered as separate commodities, and special parities are sometimes calculated for commodities produced in certain areas where such commodities are covered by a marketing agreement or order program.

Where necessary, of course, average or normal differentials for different varieties, classes, or grades of a com-

modity and average or normal spreads between different markets, methods of sale, or locations can be calculated and applied to the average parity price for the Nation. These spreads or differentials, however, should not themselves be considered parities, as they will often need adjusting or recalculating due to changes in methods of processing, in marketing and transportation costs, and in the distribution of supplies relative to demand. Parity prices may also be corrected for seasonal differences, especially where there is a reasonably regular and well defined seasonal movement.

Grade and location differentials, for example, are worked out and used in connection with almost all commodity loans made by the Commodity Credit Corporation, as well as in connection with most of the price-support programs under section 4 (a) of Public, No. 147, 77th Congress. In addition, the Department has announced and regularly publishes in the Midmonth Local Market Price Report a series of parity price equivalents for the several classes of beef cattle at Chicago, and similar calculations for other commodities will be worked out and released as needed.

The published parity prices for eggs, butterfat, and wholesale milk are corrected for seasonal variation. This is done by multiplying the 1909-14 base price by the index of prices paid, including taxes and interest, and then multiplying the resulting parity price by the appropriate seasonal factor for the particular month. These factors, as well as seasonal indexes for a considerable number of other agricultural commodities, are given in the Midmonth Local Market Price Report for May 15, 1942.

THE current legal bases for calculating parity are found in section 301 of the Agricultural Adjustment Act of 1938, as amended, and sections 2 and 8 (e) of the Agricultural Marketing Agreement Act of 1937. Section 2 of the Agricultural Marketing Agree-

ment Act is in effect a reenactment or the definition of parity prices as contained in the Agricultural Adjustment Act of 1933, as amended, which is the same essential definition as used in the Agricultural Adjustment Act of 1938, as amended. Section 8 (e) of the Agricultural Marketing Agreement Act of 1937 sets forth the procedure to be used when satisfactory data cannot be obtained for the base period 1909-14.

In certain cases, the Congress has provided that "comparable prices" can be calculated, which shall in effect be substituted for the parity prices as calculated according to the regular method. This authority is contained in section 4 of Public, 147, 77th Congress. This amendment provides that the Secretary of Agriculture shall so use such funds as are available to support prices for nonbasic commodities at not less than 85 percent of the parity or comparable price therefor whenever it may be found necessary to encourage an expansion in production. Comparable prices are to be determined whenever the production or consumption of a commodity has so changed in extent or character since the base period as to result in a price out of line with parity prices for the five basic commodities, corn, cotton, tobacco, rice, and wheat.

So far, the only commodities for which comparable prices have been calculated are soybeans, peanuts for oil, and dry field peas, all of which are commodities which have come into general use since 1929. The method used in determining comparable prices for these three commodities is based upon the calculation of a series of base prices which "bear the same relation to the average base prices of corn, cotton, wheat, rice, and tobacco as the actual prices of the same commodities were to the average actual prices of these five basic commodities in the 60 months, August 1934 through July 1939."

O. V. WELLS.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of industrial workers (1935-39 = 100) ²	Cost of living (1935-39 = 100) ³	1910-14=100					Farm wage rates
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in—		Prices paid, interest, and taxes		
					Living	Production and living			
1925.....	90	126	125	151	163	147	156	170	178
1926.....	96	131	126	146	162	146	155	168	179
1927.....	95	128	124	139	160	144	153	166	177
1928.....	99	127	123	141	160	145	155	168	178
1929.....	110	134	122	139	159	147	154	167	180
1930.....	91	110	119	126	150	141	146	160	167
1931.....	75	85	109	107	128	123	126	140	130
1932.....	88	59	98	95	108	109	108	122	96
1933.....	69	61	92	96	104	108	108	118	85
1934.....	75	76	96	109	122	123	122	128	98
1935.....	87	87	98	117	124	127	125	130	103
1936.....	103	100	99	118	123	125	124	128	111
1937.....	113	117	103	126	128	136	131	134	126
1938.....	89	91	101	115	122	125	123	127	125
1939.....	108	105	99	113	120	122	121	125	128
1940.....	123	119	100	115	121	124	122	126	126
1941.....	156	163	105	127	131	131	131	134	154
1941—July.....	160	173	105	130	130	129	130	133	160
August.....	160	171	106	132	131	132	131	136	—
September.....	161	177	108	134	136	135	136	138	—
October.....	163	175	109	135	140	138	139	141	165
November.....	166	180	110	135	142	139	141	143	—
December.....	167	187	110	137	143	141	142	143	—
1942—January.....	171	196	112	140	146	145	146	146	166
February.....	172	194	111	141	147	147	147	147	—
March.....	171	195	111	142	150	149	150	150	167
April.....	173	202	115	144	152	149	151	151	177
May.....	176	208	116	144	154	150	152	152	—
June.....	180	213	116	144	154	150	152	152	183
July.....	—	—	—	—	154	150	152	152	202

Year and month	Index of prices received by farmers (August 1909 = 100)							Ratio prices received to prices paid, interest, and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	
1925.....	157	177	172	153	141	153	163	92
1926.....	131	122	138	143	147	152	159	86
1927.....	128	128	143	121	140	155	144	84
1928.....	130	152	176	150	151	158	153	89
1929.....	120	144	141	140	150	157	162	87
1930.....	100	102	162	140	134	137	129	79
1931.....	63	61	98	117	92	108	106	67
1932.....	44	47	82	102	63	81	82	53
1933.....	62	64	74	105	60	82	75	59
1934.....	93	99	100	103	68	95	89	70
1935.....	103	101	91	125	117	108	117	83
1936.....	108	100	100	111	119	119	115	80
1937.....	126	95	122	123	132	124	111	121
1938.....	74	70	73	101	114	109	108	95
1939.....	72	73	77	105	110	104	94	92
1940.....	85	81	79	114	108	113	96	98
1941.....	96	113	92	144	144	131	122	122
1941—July.....	98	121	93	120	151	132	127	125
August.....	99	128	100	133	155	135	130	131
September.....	106	150	89	145	163	140	141	139
October.....	101	144	107	164	154	145	146	139
November.....	103	146	98	147	149	148	157	135
December.....	112	138	98	162	157	148	153	143
1942—January.....	119	143	102	204	164	148	147	149
February.....	121	150	98	161	173	147	135	145
March.....	122	151	111	136	180	144	180	146
April.....	120	158	118	158	196	142	131	150
May.....	120	150	131	152	199	143	134	152
June.....	116	153	148	169	191	141	137	151
July.....	115	155	131	200	193	144	145	154

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Bureau of Labor Statistics.

³ Adjusted for seasonal variation. Revised November 1941.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 88.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

UNITE FOR VICTORY THE AGRICULTURAL SITUATION •

SEPTEMBER 1942

A Brief Summary of Economic Conditions

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SECRETARY WICKARD announced at month's end: (1) *I am prepared to approve the placing of ceilings on livestock prices if a practical plan for livestock marketing can be evolved; (2) I believe it would be wise to repeal the 110 percent of parity provision contained in the Emergency Price Control Act of 1942.* * * * Both recommendations were made in a Nation-wide radio broadcast in which the Secretary emphasized the seriousness of the growing threat of inflation to our war effort. He appealed to farmers to lead the way in breaking the "log-jam of unwillingness of each of the great economic groups to accept controls unless at the same time controls are placed on the others." And in order not to endanger the price-control structure, Secretary Wickard suggested subsidies to farmers instead of increased prices, where this should become necessary in order to get production of vital war commodities. * * * Next evening, Price Administrator Henderson warned that the battle against inflation is in danger of being lost unless drastic action is taken immediately to limit increases in farm prices and wages.

'Unite for Victory'

BY CLAUDE R. WICKARD, SECRETARY
OF AGRICULTURE

UP to now we have done fairly well in the management of our war-time affairs. But we have not done half well enough. It is clear that we can't just continue at our present pace and wait for victory. It is not a question of *when* we win the war; it is a question of *if* we win the war.

On the home front the war job is everybody's job. We can't get it done if any group hangs back and lets others carry the load. If we do not free ourselves from our own greed and selfishness, we will end up as slaves to the greed and selfishness of the Axis masters.

I am sure that the vast majority of Americans know how foolish it is to try to conduct business as usual in a world at war. I think I know particularly well how the great majority of American farmers feel. I know their sound common sense and their willingness to face facts and make sacrifices. This year's production of crops and livestock shows where farmers stand.

Despite limitations of labor and fertilizer and machinery, farmers are smashing all records—not only for total production, but in the particular products that are needed most for winning the war. They have converted to war needs. They are working the longest hours of any group in the country, and the mothers and children are working along with the men to carry on the battle of Food-for-Freedom. They are being called on to produce more and more with less and less.

BUT farmers will keep on doing their best to win the battle of production, and I know they will do their part in the battle against inflation, too. For the time has come for

united action, across the whole front, to keep up production, and to hold down increases in industrial prices, farm prices, and wages.

It would be a national catastrophe for us to have an inflationary wartime boom and a post-war crash. No one would be harder hit by deflation than the farmers. So farmers are ready to do their part in the President's broad anti-inflation program. They are in a better position to share in this battle than they have been in many years. Farm income for this year will be the highest on record. The average of farm prices has reached parity, and has reached it at a time of the largest farm production we ever have had. Though I realize that many individual farmers still have low incomes, the combination of fair prices and large production assures a good national farm income. The great majority of farmers ask nothing further. They do not want to grasp for more at the expense of the Nation's safety.

THE unusual wartime demands for meat have kept livestock prices going up. There has been no ceiling on livestock prices although there are ceilings on the retail price of meats. This situation, inevitably, has caught many meat packers, particularly the smaller firms, in a squeeze. Apparently this squeeze is caused by the fact that those packers who are able to do so are bidding up the price of livestock in order to get enough supply to fill their expanding orders. They are bidding more for livestock than the meat dressed out of the livestock will bring under existing price ceilings. They are doing this because they are willing to give up profits temporarily in order to keep their line-up of customers. As a result, some packers who are unable to compete on this basis, have either closed their plants already or are faced with closure.

¹ Condensed from radio broadcast over Blue Network, 10:30 p. m., August 19, 1942.

In ordinary times this is a situation which could be left to work itself out. But these are not ordinary times. We are at war and the Nation needs every available packing plant facility to handle the great run of hogs and cattle that will start coming to market in the late fall. For the sake of the Nation we must keep all packing plants in running order.

Furthermore, the squeeze has become so tight that there is great danger of wide-open violations of the price ceilings for meats. Unless something is done, the whole structure of price control may be jeopardized. With the Nation at war, the question of who is to blame for the price squeeze ceases to be the problem. The problem becomes one of keeping the packing industry in operation full tilt, and of preserving the price ceilings. With the facts and the problem before them, I am sure that the farmers of the Nation will approve the plan of action which I am now going to explain.

AS Secretary of Agriculture, I must give approval before the Office of Price Administration can place ceilings on livestock prices. I am prepared to give this approval if a practical plan for livestock marketing can be evolved. Such a plan must not permit abnormal profits to anyone in the industry at the expense of the producers or consumers. With the necessary measures, such as allocation of supplies, the plan must facilitate a more equitable distribution of meats. Also, the plan must be one that not only will protect packers from high prices, but also will protect farmers from low prices.

Ceilings on livestock prices will not increase the supply of meat to consumers. The reasons for putting the ceilings on livestock prices are to keep the packing industry in full operation, and to safeguard the price-control structure.

THE Price Control Act prohibits ceilings on processed farm products if the ceiling price reflects a farm price of less than 110 percent of parity. A

year ago when I testified before a House Committee in support of the price control bill I approved the 110 percent limitation. At that time many prices were far below parity. It seemed to me that they could never average parity unless there was an opportunity for some of them to be slightly above parity at least part of the time. Now the situation is different. Farm prices have reached parity on an average.

Today the 110 percent provision is being pointed to by other groups to prove that farmers are asking for more than their fair share. It is being used as an argument to slow down economic controls in other fields. Under the present circumstances, I believe it would be wise to repeal this provision. It is my earnest hope that the prices of each farm commodity can be held at the level which will make completely effective the price-control part of the President's wartime economic program.

I am not forgetting that production is all-important, and that we may need to increase returns to farmers on some products in order to get production of vital war commodities. In instances where changes within the framework of price controls cannot accomplish this, I think it is in the national interest to give farmers increased returns through subsidies rather than through increased prices which may endanger the price-control structure.

FARMERS want action now to win the battle against inflation. They favor controls clear across the board. But action is being held up behind a log-jam of unwillingness of each of the great economic groups to accept controls unless at the same time controls are placed on the others. Farmers are ready to lead in breaking the log-jam. We cannot have continued rises in farm prices, or in any other prices, without losing the battle of inflation, and I am tonight asking the farmers of America to take the lead in this battle as they have taken the lead in the battle of production. The time has

come to settle down to the business of winning this war, and we are not going to win it by talk. It is time for action.

I am sure that the farmers of America stand ready to accept their full responsibility.

Commodity Reviews

PRODUCTION: Increase

PRODUCTION prospects—principally feed and food grains—were upped sharply last month, as yields per acre promised a turn-out considerably better than had been expected earlier in the season. The Crop Board stated that crop prospects were the best on record for that time of year; that “with good growing conditions in nearly all States and a full output needed, the total volume of crops produced is expected to be about 21 percent above the predrought average.” Increase above 1941 would be about 9 percent.

Corn was indicated at 2,754 million bushels as compared with 2,673 million in 1941, oats 1,332 million against 1,176 million in 1941, wheat 955 million against 846 million. Peanuts to be picked and threshed were indicated at 2,800 million pounds as compared with 1,477 million in 1941, and tobacco at 1,361 million pounds against 1,261 million. A cotton crop of 13.1 million bales was indicated, as compared with 10.7 million in 1941.

The Board said that the favorable growing conditions for feed crops and pastures were helping to increase the output of livestock and livestock products to unprecedented levels. Milk production per cow was nearly 2 percent larger this August 1 than last, egg production was 14 percent larger this July than last, marketings of beef cattle and sheep were reported as being “heavy, even though numbers retained in breeding flocks and herds still appear to be increasing quite generally except in the dry Southwest.”

The Board added that a further increase in hog production is to be expected since the production of feed grains is now estimated at 112 million tons, or about 5 percent more than

production in 1941. This quantity added to the large reserves on farms July 1 indicates a record supply of feed grains for 1942-43. In addition, there will be a largely increased supply of oil meals, and 125 million bushels of Government wheat is being offered for sale for feeding purposes.

LABOR: Fall Harvest

Fall harvest is underway—a bigger harvest than ever before. Harvest labor force will probably top 12 million family and hired workers—about the same number as in 1941, but in composition very different. Principal change is the use of much inexperienced help in replacement of experienced hands gone to war and war industries.

Crop correspondents reported as of August 1 that negligible quantities of crops had been left unharvested for lack of labor; certainty is that by every means—greater use of farm women, townspeople and others, and efficient use of available farm machinery—the volume of crops harvested will be little short of the quantity produced. To help with the harvest load, arrangements have been made for the transportation of migratory workers into labor shortage areas, and for making Mexican workers available if sufficient help cannot be obtained within the United States.

Problem after harvest will be to get the products stored on farms, transported to primary concentration points for distribution to processors, wholesalers, and terminal storage. Best use must be made of available motor transport, and a heavy burden will be upon the railroads. While the harvest is on the heavy fall movement of livestock to feed lots and slaughter will get underway, straining to the utmost all transport and processing facilities.

PRICES: Parity

Many crops continued to sell below parity during the past month, but other crops, led by livestock and livestock products, were above, and the average of all was 9 points up over July. Prior to August, the ratio of prices received to prices paid, interest, and taxes had held at approximate parity for the preceding 8 months, a situation longer sustained than in any other period since World War I. War-time demand has been the principal factor in the rise in farm products prices during the past year, jumping the prices received-paid ratio to 107 last month.

Prices received by farmers are approximately 24 percent higher than at this time last year. Volume of farm production is about 10 percent larger this year than last, and the total of cash income from marketings and Government payments is expected to set an all-time high record of approximately 15 billion dollars. Total for 1941 was 11.8 billion. Probability is that gross income (including the value of home consumption and the rental

value of farm dwellings) will also set a new record; at least, that it will be close to the preceding high of 17.7 billion dollars in 1919.

Index Numbers of Prices Received and Paid by Farmers

Year and month	Prices received	Prices paid interest and taxes	Buying power of farm products ¹
1941			
January.....	104	128	81
February.....	103	128	80
March.....	103	129	80
April.....	110	129	85
May.....	112	130	86
June.....	118	132	89
July.....	125	133	94
August.....	131	136	96
September.....	139	138	101
October.....	139	141	99
November.....	135	143	94
December.....	143	143	100
1942			
January.....	149	146	102
February.....	145	147	99
March.....	146	150	97
April.....	150	151	99
May.....	152	152	100
June.....	151	152	99
July.....	154	152	101
August.....	163	152	107

¹ Ratio of prices received to prices paid, interest and taxes.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average, August 1909-July 1914	August average, 1909-13	August 1941	July 1942	August 1942	Parity price, August 1942
Wheat (bushel).....cents..	88.4	89.5	88.5	94.6	95.4	134.4
Corn (bushel).....do.....	64.2	70.9	70.0	83.1	83.4	97.6
Oats (bushel).....do.....	39.9	40.9	32.5	43.9	42.6	60.6
Rice (bushel).....do.....	81.3		¹ 104.0	169.5	162.9	123.6
Cotton (pound).....do.....	12.4	12.3	15.33	18.55	18.03	18.85
Potatoes (bushel).....do.....	69.7	84.0	¹ 68.0	125.8	115.4	² 108.1
Hay (ton).....dollars..	11.87	11.35	7.64	9.07	8.89	18.04
Peanuts (pound).....cents..	4.8	4.8	4.29	5.59	5.99	7.30
Apples (bushel).....dollars..	.96	.72	.85	1.52	1.16	1.46
Hogs (hundredweight).....do.....	7.27	¹ 7.32	¹ 10.48	13.78	14.13	11.05
Beef cattle (hundredweight).....do.....	5.42	¹ 5.29	9.04	10.79	11.30	8.24
Veal calves (hundredweight).....do.....	6.75	¹ 6.60	10.50	12.56	12.91	10.26
Lambs (hundredweight).....do.....	5.88	¹ 5.63	9.56	11.82	12.07	8.94
Butterfat (pound).....cents..	26.3	24.1	36.0	37.5	40.6	38.0
Chickens (pound).....do.....	11.4	11.7	16.3	18.7	19.6	17.3
Eggs (dozen).....do.....	21.5	18.1	26.8	29.5	32.2	31.7
Wool (pound).....do.....	18.3	18.8	¹ 85.6	39.2	39.4	27.8
Tobacco: ⁴						
Flue-cured, types 11-14.....pounds..	22.9		23.8		33.7	27.9
Maryland, type 32.....do.....	22.9		35.0	31.0	29.5	21.8

¹ Revised.

² Post-war base.

³ Adjusted for seasonality.

⁴ Base price crop years 1919-39.

⁵ Base price crop years 1934-38.

FARM FAMILY: Spending

Bureau of Home Economics said last month that farm families put more than twice as much into savings in 1941 as they did in 1935-36. "They reduced debts, bought defense bonds and stamps, and made investments of other kinds. They spent more for living, too, but on the whole, such outlays were increased by scarcely a third. Amounting to a third or more were the increases in expenditures for food, clothing, for fuel, light and refrigeration combined, for furnishings and equipment, and for gifts, contributions, and income and personal taxes."

Net money incomes of farm families averaged 46 percent higher in 1941 than in 1935-36. Many farm families moved from lower to higher income classes. At each income level more was spent for clothing and household furnishings; and in the upper income classes, more for food. In 1941, the average income (money and non-money) for farm families totaled \$1,664. Of this, about \$518 represented the value of noncash income represented by food and other goods produced at home, and the value of occupancy of the farm house.

FEED: High-protein

Oilmeals from crushings of this year's soybeans, peanuts, flaxseed and cottonseed, plus gluten feed, are expected to add to a total supply of high-protein feeds 40 percent larger than in 1941-42. All can be utilized with grains and forage in the best balanced and most efficient feeding program farmers have ever conducted.

Feeding requirements will probably be larger this season than our feed grain production, so that by next year we will have dug into reserves. The most noticeable depletion will be in corn carryover. To some extent the reduction of feed grain reserves may be offset by the release of 125 million bushels of wheat for feed. The Department of Agriculture has announced sale prices for feed wheat ranging

from 75 to 100 cents per bushel, for October delivery, with Corn Belt prices considerably lower than under last year's program.

BAE expects the price situation to remain relatively favorable for feeders. Grain prices are expected to average higher than last year, but because of large supplies, general price ceilings, and the feed wheat program the increases are not expected to equal the rises in prices of livestock and their products. The ample supplies of high-protein feeds also will aid in maintenance of a relatively favorable feed-product ratio.

CATTLE: On Feed

Heavy marketings of fed cattle are reflected in reports showing considerably fewer cattle on feed this summer than last. Figures showed 19 percent fewer on feed in the Corn Belt this August 1; it is hardly to be expected, in view of price ceilings and other conditions, that this difference will be made up in coming months. To do so, the shipments of stockers and feeders into the Corn Belt the remainder of this year must greatly exceed the record movement during the like period in 1941.

Decreases in cattle on feed in the Corn Belt this August 1 compared with last ranged from 10 percent in Missouri to 30 percent in Ohio, Michigan, and Wisconsin. For the 5 Eastern Corn Belt States as a whole the decrease was 20 percent; for the 6 Western Corn Belt States it was 18 percent. Cattle feeders had indicated last spring they would feed about as many cattle this year as last, but subsequent events affecting price spreads induced heavy marketings instead.

HOGS: Salients

BAE enumerates 5 "important features" in the outlook for hogs:

1. The 1942 spring pig crop totaled nearly 62 million head, 25 percent

larger than the 1941 spring crop, and much the largest on record;

2. breeding intentions reported in the June pig survey indicate that this year's fall crop may total about 43.5 million head, 22 percent more than the 1941 fall crop;

3. total hog slaughter in the 1942-43 marketing year (October-September) will exceed 90 million head and slaughter under Federal inspection may reach 65 million head, compared with inspected slaughter of 52 to 53 million head in 1941-42;

4. the number of hogs marketed October through April may exceed last year's total by 9 to 10 million head;

5. to relieve a possible marketing jam in December-January, farmers are urged to fatten out and market early spring pigs as rapidly as possible. Carrying late pigs beyond the December-January peak also is recommended.

LAMB: Price Ceiling

Ceiling prices have now been established at wholesale and retail for lamb carcass and cuts, which were omitted from the General Maximum Price Regulation of late spring. The new order is temporary, effective for 60 days beginning August 1, and establishes the ceiling at highest prices prevailing during the last week of July. Lamb prices have advanced sharply since last March, at which time they were too low to be included under the general price ceiling under terms of the Emergency Price Control Act.

The lamb crop this year was slightly smaller than last year's record. Although breeding ewes generally were more numerous this year than last, in some areas bad weather resulted in a smaller number of lambs saved per 100 ewes. Early lambs, normally ready for market before early August, were a little later than usual but late summer conditions were favorable. Market supplies this fall should be about the same as last year, possibly a little smaller. In May-July of

the 1942-43 marketing year inspected slaughter was running a little larger than a year earlier, but the smaller crop makes unlikely a continuance of this increase. Early summer slaughter probably included a larger-than-usual number of yearling lambs carried over from the 1941 crop, and a rather abnormal heavy movement of native spring lambs during July.

FATS, OILS: Increase

United States production of fats and oils is exceeding earlier expectations, may total nearly 12 billion pounds in 1942-43 as compared with less than 10 billion in 1941-42. But imports from the Far East have been greatly reduced and imports from other areas may be restricted by a scarcity of shipping space. On the other hand, exports under Lend-Lease will be greatly increased. Domestic civilian consumption also is likely to go up unless restrained by Government action. Retail price ceilings are on all fats and oils except butter and linseed oil. Price ceilings have encouraged processors and others to draw upon reserves of fats and oils instead of buying for future needs.

POULTRY: Abundance

Record supplies of chicken will be available for consumers this fall. Farmers are raising 10 percent more chickens this year than last, and before marketing are feeding them to heavier weights than usual. Although part of the increase in numbers will be kept in laying flocks on farms, the market movement this year has been and will be the largest on record. Ordinarily chicken has constituted about $\frac{1}{4}$ of total meat consumption (dressed weight basis) in the United States—in 1941 the figures were 12 percent for chicken and 2 percent for turkey. This year, with record supplies and less pressure on poultry from lend-lease and military sources than on other meats, the percentage of poultry in the civilian meat supply will be a new high.

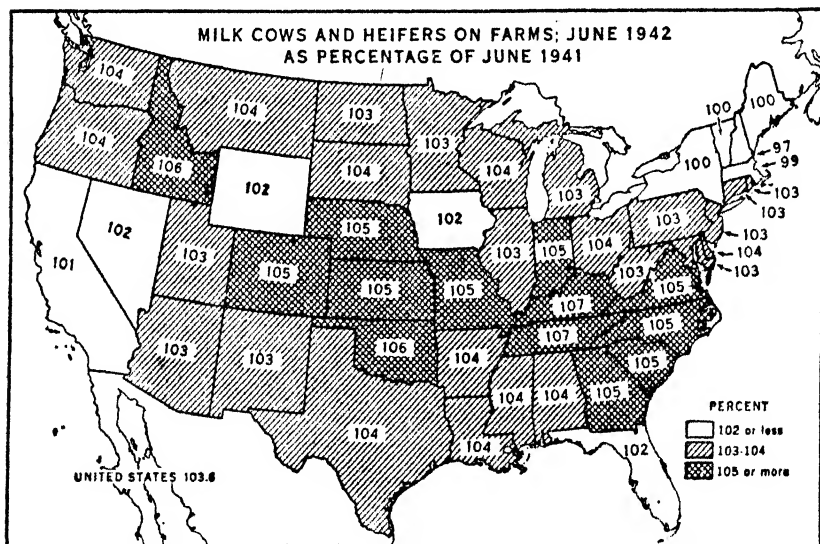
Biggest increases in the number of chickens have been in the Midwest states. Increases are general, however, throughout the country. The large market movement this fall is expected to sell at good prices to producers. There may be temporary surpluses at local markets, but prices are expected to remain well above prices last fall. Chicken prices are still below the minimum levels at which price ceilings may be set under terms of the Price Control Act.

COTTON: Grade

Cotton farmers are harvesting their crop this year with a greater incentive for careful picking and ginning than in many years. Reason is that premiums and discounts for grade are much greater due to war demands for a quality of cotton higher than average. Discounts are particularly marked for grades below Middling. Central market differences in the values of a 500-

pound bale of Middling and grades below Middling have been running 3 to 4 times as great as last year. Farmers thus have the opportunity to make important additions to income by maintaining as high a grade as practicable, and at the same time will furnish the mills a bale of cotton more useful in war production.

Longer staples and higher grades will be in great demand for the duration of the war. Domestic mills are operating at record-breaking rates each month, and they always have consumed the better qualities while other qualities went into export. High quality standards for military orders and pressures to maintain capacity output by avoiding stoppages also add to the premium on high-quality cotton. Present mill consumption—keeping pace with production of cotton—is depleting stocks of cotton more rapidly in the high qualities than in the low.



Midsummer reports indicated a continuation of the upward trend in numbers of milk cows. Most of the more important dairy States showed increases from June 1941 to June 1942 not greatly different from the national increase of 3½ percent. Increases of 5 percent or more were evident mainly in the Central Plains States and in the Southeast. But in New York and New England the number of milk cows was practically the same this summer as last.

WHEAT: For Feed

One hundred and twenty-five million bushels of Government-owned feed wheat are for sale by the United States Department of Agriculture at prices not less than 85 percent of the parity price for corn. Prices for September delivery range from 74½ to 99½ cents throughout the country. Farmers are being urged to feed more wheat for rapid conversion into livestock products, and feed manufacturers to include more wheat in feed mixtures. Prices for October delivery will be ½ cent a bushel higher than September. October selling prices will closely approximate 85 percent of corn parity and consequently be very near the corn loan rate for the 1942 crop.

Farmers who have rescaled 1941 loan wheat stored on their farms may redeem their wheat at the wheat feed price for feeding only, except in soft red winter wheat areas. The Department said that because of the increasing shortage of soft red winter wheat supplies for milling and seed there will be no further sales or redemptions of this class of wheat for feed. Prices and other information on the Government wheat feed program are obtainable at State and county offices of the Agricultural Adjustment Agency, and at offices of the Commodity Credit Corporation at Chicago, Kansas City, Minneapolis, and Portland.

WOOL: Record

United States production of wool is making a new high record this year. Shorn wool alone is estimated at more than 392 million pounds; total of shorn and pulled wool combined doubtless will top last year's output of 455 million pounds. Production would be even greater were it not for a lighter weight of fleece this year—averaging slightly less than 8 pounds per head from 49 million sheep as compared with more than 8 pounds from 48 million sheep in 1941.

Leading producing States are Texas

(79.3 million pounds shorn this year, compared with 80.1 in 1941), Wyoming (33.0 million against 33.4 million), Montana (32.4 million against 33.1 million), California (24.4 million against 24.6 million), and Utah (20.3 million against 20.1 million in 1941). Military demand is for all the wool that can be had; wool supply for civilian use may soon be non-existent.

EGGS: Drying

Numbers of laying hens on farms have begun their seasonal rise, starting from a higher level this season than last. BAE estimates that numbers of layers will be 6 to 8 percent higher next January 1 than last. Egg production at that time should be increased about the same percentage. Because of the major increase in egg production begun last fall, this percentage rise is relatively less than the increase of 16 percent in the first half of 1942, but in terms of actual egg output the total is considerably more.

Increased egg production is going to drying plants and to the booming war towns, not to the customary terminal markets. Drying plant capacity in August was about 315 million pounds, based on 300 days operation of 20 to 22 hours per day. On the recommendation of the Food Requirements Committee, the WPB in mid-August approved the allocation of materials for expansion of capacity by 110 million pounds more, which is considered sufficient for our needs. Some idea of the quantity of eggs required for drying is shown by the fact that August 1 commitments alone for future delivery of dried eggs to the Department of Agriculture up to December 31 would require the equivalent of 7.2 million cases of shell eggs.

TOBACCO: Prices

Markets for flue-cured leaf opened in late July at prices considerably higher than last year. Average Georgia and Florida prices were almost 50 percent higher than season averages

for the same type last year. BAE expects that prices of all major types of domestic tobacco will average higher than last year. Not only are prices graded for grade higher this season, but quality of tobacco seems to be better.

Growers are expected to produce about 8 percent more tobacco of all types this year than last, so that income prospects are favorable in all respects. Total supplies to meet consumer needs for the 1942-43 marketing season probably will be about the same as last season, since important reductions in stocks were made by the large consumption of recent months. Under stress of war-stimulated demand, consumption of all types of tobacco products has been increasing and still further increases are expected. Among the notable changes in consumption has been a reversal of the declining trend in use of chewing tobacco. Wartime reduction of the export market, however, offsets increased domestic consumption and leaves ample stocks of tobacco to meet all our demands.

FRUITS: Processing

Packs of processed fruits—canned and dried—will be so large in 1942-43 that sale of fruit for fresh consumption will be noticeably smaller than last season, although total fruit production is expected to be only slightly smaller. August crop indications were that the combined production of peaches, pears, grapes, cherries, plums, prunes, apricots, and commercial apples would be well above average, but about 3 percent below last year's bumper production.

Military and lend-lease requirements are large for processed fruits, and recent reservation orders have practically eliminated civilian supplies of dried fruits for the time being. The effects of war needs are evident in that although the dried fruit pack this year may be 20 to 25 percent greater than last season, and the canned fruit and juice pack 10 to 15 percent larger, civilian consumption will have to be

curtailed. Sufficient fruit—fresh and canned—will remain to meet reasonable requirements of civilians, but diversity and prompt availability may be less than in former years.

The commercial apple crop this year is estimated to be about the same as last year, but August prices reflected the much higher consumer incomes and were considerably above prices in August 1941. Orange supplies from the California Valencia crop also sold at fairly high prices, indicating a favorable marketing season for the record orange and grapefruit crops expected this year.

CANNING CROPS: Increase

August estimates placed the total of tomatoes, sweet corn, green peas, and snap beans for processing this year at 5.3 million tons. This compares with 4.4 million tons in 1941, and with 2.6 million average for the 10 years 1931-40. This year's total consists of 3.3 million tons of tomatoes as compared with 2.8 million in 1941, 1.3 million tons of sweet corn as compared with 1.1 million last year, 464,000 tons of green peas as compared with 345,000 in 1941, and 178,000 tons of snap beans compared with 132,000.

The estimates assumed average growing conditions during the remainder of the season. Biggest production of tomatoes is in California (847,000 tons), Indiana (561,000), Maryland (299,000), Ohio (240,000), New Jersey (209,000). Sweet corn—Minnesota (255,000 tons), Illinois (204,000), Wisconsin (157,000), Iowa (137,000).

—FRANK GEORGE.

Indications that meat rationing will be necessary arise mostly from the fact that with greater incomes, consumers tend to eat more meat than usual. Prospects are that, with rationing established, supplies of meat would be sufficient to maintain per capita consumption for civilians very near the level of recent years.

Consumer Spending in 1941 and 1942

THE response of consumer spending to changes in incomes, prices and market offerings is a major concern to government and other groups responsible for production programs and fiscal policies aimed at maximizing war effort while safeguarding civilian welfare. The urgency of the demand for such information is so great that funds were allocated to the Bureau of Home Economics and the Bureau of Labor Statistics in the spring of 1942 for the collection of data on consumer incomes and expenditures from representative samples of families and single consumers living in urban communities and in rural territory. The first tabulations of the data have just become available and apply to the year 1941 and the first quarter of 1942. In response to a considerable volume of requests, the two Bureaus have combined the data from the urban and rural samples in preliminary estimates of the consumption of all American families in relation to money income.

The estimates for all families, as well as the samples for the three population groups, urban, rural-nonfarm and farm, indicate convincingly that extravagant spending was not characteristic of American families, large numbers of whom were receiving substantial increases in income as the Nation moved through the Defense period into the Wartime economy. The principal differences in spending of families of the same money income bracket in 1941 compared with 1935-36 can be explained in terms of price levels and available supplies and give no indication of care-free and non-essential purchasing. Luxury items which loomed large in the spending of the period of World War I (at least according to popular impression) do not appear to have attracted the families of the workers, the farmers and the business men whose incomes grew

larger as the country entered World War II. The total expenditures for family living, income class by income class, were not substantially different in 1941 than in 1935-36. Personal taxes were higher as well as gifts and welfare contributions, so that the savings (changes in assets and liabilities) were lower. During the first quarter of 1942 total expenditures were below the 1936 level, and although taxes were still higher, the savings of the upper income brackets were substantially more than in 1935-36.

INCREASES in consumption appear to have lagged behind rising income. The notable example that can be read from these first tabulations is in housing expenditures. Although rents during the year 1941 and the first part of the year 1942, as measured by the United States Department of Labor index, were 5 to 9 percent above the 1935-39 level, the expenditures of families for housing and household operation in 1941 in each income class were substantially below the 1935-36 expenditures and did not, in the first quarter of 1942, greatly exceed the 1941 level.

Probably none of the groups of goods and services used in classification offers the possibilities of substitution of one article for another as much as the food group. With rising prices, the consumer can alter not only the items, but also the quality and quantity purchased. This process of substitution appears to have taken place to some considerable degree among families in the lower income brackets. Their expenditures for food were not above the 1935-36 level either in 1941 or in the first quarter of 1942, although the average increase in the price level was nearly 6 percent in 1941 and was around 16 percent in the first quarter

of 1942. Families apparently do not increase their cash expenditures for food as the price level rises unless they have incomes allowing a relatively comfortable plane of living. For the total group of families, farm and non-farm, the tendency for the money outlays on food to follow price changes appears to begin around a money income of \$1,500. Families averaging \$2,500 money income spent about \$700 for food, compared with \$600 for families with such incomes in 1935-36. During the first quarter of 1942, however, \$2,500 families showed no increase over an average quarter of 1941.

IN 1941 one-half of the families and single consumers had money incomes below \$1,480 and in the first three months of 1942 half of consumer incomes were below an annual rate of \$1,540. When income in kind is added, the corresponding figure for 1941 was \$1,550 and for 1942, \$1,610. These averages reveal how great a rise in incomes has taken place since 1935-36. At that time, the median income, money and nonmoney, was \$1,070. With such an increase in income the aggregate expenditures for all consumption groups would be increased even though no change in pattern of consumption by income level had taken place. Rough calculations from these estimates indicate that the money expenditures for food for all families, independent of income, amounted to an average of approximately \$500 in 1941, compared with \$378 in 1936, an increase of 32 percent. The aggregate in the first quarter of 1942 approached 4 percent above the 1941 level.

THE greatest differences in the consumption of families in the three periods under consideration arise in the consumption groups that include consumers' durable goods. In 1941 the expenditures for household furnishings and equipment were well above the 1935-36 levels even in the

low-income groups. Apparently all segments of the population hastened to buy goods in diminishing wartime supply. At \$750 money income, families spent \$35, on the average, for furnishings and equipment compared with \$30 in 1935-36. At the \$2,500 point, the items included in this grouping averaged \$140 compared with about \$85 in 1935-36. In the first quarter of 1942, after many articles of equipment, washing machines and refrigerators in particular, were already scarce or unobtainable, expenditures for this category were back on the 1935-36 level.

Expenditures for automobiles during 1941, however, were no greater than would be expected on the basis of shifts in the amount of consumer incomes. For the same money income groups, the average outlay for automobile purchase and operation was approximately the same in 1941 as in 1935-36. In the first quarter of 1942 the total outlay for automobiles dropped almost to the level of operating costs in 1935-36. At the \$2,500 point families in 1942 spent at an unusual rate of \$140 compared with \$240 in 1941. But the outlays for transportation other than by private automobile increased; though still small in the first quarter of 1942, this item has doubtless increased substantially since spring.

Expenditures for clothing in 1941—9 percent above the 1935-36 level—evidently included some advance buying since the index of clothing prices did not reach 110 on the 1935-36 base until September of that year. Income class by income class, average outlays for clothing during the first quarter of 1942 were as low as in 1935-36. The drop in clothing purchases below the 1941 level may be seasonal in character.

IF the data for the first quarter of 1942 may be taken as indicative of the course of consumer spending during the remainder of the year, it may be inferred that the inability to buy certain goods does not result in a stamper towards others. What is not

Income and Outlay ¹

American Families and Single Consumers ²

Net money income	Distribution of consumer units by net money income ³	Average net income		Average money expenditures for family living						Average net saving or deficit
		Money	Money plus in kind	Total	Food	Housing and household operation	Furnishings and equipment	Clothing	Automobile	
12 MONTHS, 1941	Percent	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
<i>All American families and single consumers</i>										
Net money income class:										
\$0 to \$500.....	16	289	545	370	143	78	13	45	21	-87
\$500 to \$1,000.....	19	741	994	738	271	164	35	85	58	-20
\$1,000 to \$1,500.....	16	1,240	1,452	1,155	399	264	63	132	101	55
\$1,500 to \$2,000.....	14	1,732	1,955	1,576	514	351	99	183	165	116
\$2,000 to \$3,000.....	20	2,448	2,655	2,214	695	488	139	270	237	166
\$3,000 to \$5,000.....	10	3,730	3,979	3,086	906	642	188	402	364	489
\$5,000 and over.....	5	11,552	11,941	6,758	1,586	1,701	299	904	781	3,724
Median consumer unit ⁴		1,481	1,692	1,361	457	308	80	156	130	87
<i>Farm families and single consumers</i>										
Net money income class:										
\$0 to \$500.....	34	270	687	375	131	43	22	68	30	-99
\$500 to \$1,000.....	25	737	1,266	696	223	94	50	117	84	41
\$1,000 to \$1,500.....	14	1,226	1,783	921	295	122	74	152	103	250
\$1,500 to \$2,000.....	11	1,701	2,303	1,201	337	149	115	178	193	526
\$2,000 to \$3,000.....	9	2,439	3,042	1,578	442	213	149	233	231	797
\$3,000 and over.....	5	5,589	6,308	2,604	515	279	160	358	294	3,403
Median consumer unit ⁴		750	1,280	710	229	96	51	119	85	45
<i>3 MONTHS, 1942 (JANUARY THRU MARCH)</i>										
<i>All American families and single consumers</i>										
Net money income class:										
\$0 to \$125.....	16	67	125	108	42	22	4	11	7	-43
\$125 to \$250.....	15	183	229	196	76	47	7	19	12	-16
\$250 to \$375.....	14	310	356	290	104	72	12	30	20	13
\$375 to \$500.....	13	433	481	381	134	93	16	42	26	45
\$500 to \$750.....	19	610	654	503	170	119	21	62	36	84
\$750 to \$1,250.....	12	932	990	720	227	154	41	95	60	161
\$1,250 or over.....	6	3,764	3,870	1,529	391	419	71	219	120	1,984
Median consumer unit ⁴		386	433	345	122	85	15	37	24	32
<i>Farm families and single consumers</i>										
Net money income class:										
\$0 to \$125.....	34	56	145	118	45	16	7	16	10	-68
\$125 to \$250.....	16	182	280	172	56	24	10	28	22	9
\$250 to \$375.....	10	305	423	224	75	32	20	34	24	68
\$375 to \$500.....	7	425	556	273	94	37	21	39	31	120
\$500 to \$750.....	7	621	743	325	113	48	24	44	38	307
\$750 or over.....	7	1,997	2,121	378	126	60	31	46	45	1,557
Median consumer unit ⁴		105	196	138	49	20	8	21	15	-38

¹ The difference between income and expenditures for family living plus savings is accounted for by expenditures for gifts, contributions, and personal taxes, and by minor discrepancies in figures furnished by families, and in a few instances by nonincome funds, such as inheritances received by families.

² Estimates based on data from the Study of Family Spending and Saving in Wartime. The Bureau of Home Economics, U. S. Department of Agriculture collected data from families and single persons living in rural territory; the Bureau of Labor Statistics, U. S. Department of Labor, from families and single persons living in urban communities.

³ The percentage of consumer units having net losses may be derived by subtracting the sum of the distribution from 100.

⁴ The averages on this line represent the income, expenditures, and savings of the consumer unit with the income below which fall half the families and single consumers in the Nation.

absorbed by taxes and price rises is directed towards savings. The purchase of Government bonds, the payment of debts, investments and insurance premiums are taking the part of consumer income that in 1941 went for refrigerators, new automobiles, and radios. Beneath these figures and those for 1935-36 lies an American pattern of living in relation to income which appears to be remarkably stable not only for all population groups taken together, but also for the main component groups, the city dwellers, the farm families, and that transition group, nonfarm families living in rural territory. In spite of much literature to the contrary, income acts as a definite upper limit, not only to expenditures, but also to the amounts of debts assumed for consumer purchases. The sums devoted to advance buying as indicated by the comparisons with the 1935-36 period are definitely in proportion to the income level.

The original data for the period 1935-36 appear in the series of Bureau of Labor Statistics Bulletins 642 through 649, and in the Miscellaneous Publications of the U. S. Department of Agriculture numbered 396 and 465 and estimates based on these are to be found in a volume prepared by the National Resources Planning Board. The preliminary estimates for 1941 and the first quarter of 1942 for all families, and the sample data for farm families are given in the accompanying table. The estimates for the total group are subject to revision after more complete data on population changes become available and after certain comparisons with data available from other government agencies are made. They have been prepared at this time in response to many requests for over-all national estimates required for policy decisions that must be made without delay.

DOROTHY S. BRADY,
Bureau of Home Economics.

Progress on Food Requirements

A GENEAL appraisal of the work of the Foods Requirements Committee thus far points toward two important developments: (1) An increased integration and coordination of the various phases of the Nation's wartime food program to meet the demands under increasing difficulties; (2) an increasing significance of the Department's food goal program.

The Committee was established as an agency to determine civilian, military, and foreign food requirements. It was designed to meet the wartime demand for a centralized body with the power to direct and handle the food problem in close relation to the other complicated problems resulting from the war production effort. It has been assigned definite responsibilities in connection with the production

and allocation of civilian and military food supplies, and various other duties in the food field.

The Department of Agriculture's primary responsibility—from the beginning of the war as well as now—is production of food, but it has been given definite new responsibilities under the general food program. This primary responsibility, and the activities related to it, will be greatly implemented by the work performed by the Foods Requirements Committee. While the Committee has been functioning only a relatively short time, it can be said generally that it will be possible to bring into sharper focus both the requirements for food, and the need for supplies and equipment for producing the food. By having a means of considering each

individual problem in relation to the entire food program, it will be possible to "put the punch where it counts the most."

THE committee has acted in one capacity or another on such problems as a program for the conservation of fats and oils, farm machinery requirements, additional facilities for food dehydration, a program for handling importation of tea, steel for farm fencing, and materials for storing the record grain crops being harvested this year. These activities illustrate also how the different phases of the wartime food program are being pulled together so that efforts affecting farm production, processing, storage, and transportation of food can be directed along most efficient lines.

Example of the programs acted upon by the Foods Requirements Committee to date is that which provided additional facilities for dehydration of food. Demands by our armed forces and lend-lease needs for certain foods have increased sharply, while at the same time the shipping situation has steadily become more critical. To meet this situation, a dehydration program developed by the Department was brought before the Foods Requirements Committee. The Committee recommended the program to WPB, where it was approved. Consequently material and equipment has been assured by high priority ratings which will result in the production of the following additional dehydrated foods during the year beginning July 1, 1942: 84,293,000 pounds spray process milk, 110,242,000 pounds of eggs, 66,189,000 pounds of vegetables, and 60,000,000 pounds of meat. The processing of these foods will mean a saving in shipping space equivalent of 1,000 shiploads in the next 2 years.

Also, after considering all requirements for meat in the 1942-43 marketing year, the Committee formulated a program to manage the Nation's record meat supply to assure minimum requirements for United States mili-

tary forces and our allies, and to distribute equitably the supply available for consumers. Recommendations included a conservation order establishing quotas for sales by packers, consumer rationing, and a voluntary conservation program until rationing can go into effect.

FOOD requirements and farm production goals under the 1943 Food-for-Freedom Program are now of vital concern. Significant as the goals have been this year, they will have even greater importance in 1943, both from the standpoint of farm production itself and the relationship of the goals program to the entire war program. Since the Foods Requirements Committee is responsible for determining food needs for civilian, military and lend-lease use, the goals as part of the entire requirements program will have even greater governmental recognition.

The Foods Requirements Committee will shortly consider food needs for the coming year. Just what the 1943 farm production goals will be cannot now be appraised accurately. However, many factors that were of less consequence last year will enter the picture in establishing 1943 goals. Shortages of labor, farm equipment and supplies, processing and storage facilities problems, the land available for certain crops and other such factors must be weighed carefully before a final decision is reached.

We can expect that for one thing, military needs for food will be much greater in 1943 than in 1942, as will also the demand for some kinds of lend-lease foods. Continued emphasis will be put on the production of livestock and livestock products. Similarly, the critical shipping situation will call for increased production of oil crops to replace the fats and oils we have normally purchased from sources outside our own country. Extremely important also is that the goals be as current as possible with the developing war situation.

SECRETARY Wickard, as chairman of the Foods Requirements Committee, is responsible for certain determinations regarding food requirements. The chairman determines the military and other governmental, civilian, and foreign requirements for foods. He determines the amount by which the domestic production or importation of foods, or agricultural materials from which foods are derived shall be increased or decreased. He also makes recommendations to the Requirements Committee of the War Production Board as to requirements for supplies or equipment needed for the production of such foods or materials. These determinations are, of course, made with the consultation of the entire Committee and with the cooperation of other government agencies.

The Department of Agriculture has been given responsibility for:

1. Increasing or limiting domestic agricultural production in accordance with the decisions of the Committee.

2. The earlier stages of food production in general, except for the production of such specified foods as dehydrated milk and eggs, for which the Department has responsibility for production through all stages.

3. The importation of foods and agricultural materials from which foods are derived. These powers have been delegated by the Board of Economic Warfare to the Commodity Credit Corporation within the Department.

4. The formulation of programs for the conservation of critical foods or agricultural materials from which foods are derived.

S. B. BLEDSOE,

Vice Chairman,

Foods Requirements Committee.

War Boards—On the Farm Front

FARM production programs for 1943 will soon be under way. And as in the first year of our part in World War II, the War Boards of the Department of Agriculture—national, state, and county—will be in the forefront of the production campaign, making known to farmers the acreages and quantities of farm products needed in Food-for-Freedom. But this will not be their only job, for the War Boards have become the guiding agency for most of the efforts through which farmers are working to win the war.

In early 1941, 5 months before Pearl Harbor, USDA Defense Boards—composed of representatives of the major agricultural agencies—were set up to consolidate and strengthen the farm programs for new tasks. Lend-lease and defense needs were showing that a new guiding force was needed for war production on the farms. Then, after Pearl Harbor, production became a still bigger task, distractions

became more numerous, and war problems impinged on farmers from all sorts of unexpected angles.

The USDA War Boards are composed of one representative each from the following organizations, at the State and County levels: Agricultural Adjustment Agency; Agricultural Marketing Administration; Bureau of Agricultural Economics; Extension Service; Farm Credit Administration; Farm Security Administration; Forest Service; Rural Electrification Administration; and Soil Conservation Service. In Washington, the Secretary of Agriculture heads the organization. Assisting him are the USDA War Board and the USDA War Board Advisory Committee, a Special War Board Assistant to the Secretary, and all the facilities of the state and county boards.

Top job for every unit of the organization is production of food for the United States and for the United

Nations. Present indications are that the job was well done in 1942, for farmers are producing record crops and livestock products this year. Next year even more production will be wanted, and the job will be harder because of shortages of labor and materials. So the 1943 job of the War Boards on production goals will be a truly big one, and already they are mobilizing all their resources to help farmers in increased emphasis on all the food, oil, and fiber crops needed for war.

BUT there will be more jobs of other sorts in 1943 too.

Already this year, War Board members helped furnish dealers with information on farm needs for nitrate of soda. They provided information to Selective Service Boards concerning essential agricultural activities and gave assistance to the United States Employment Service in locating local offices. They cooperated with the Explosives Control Division of the Bureau of Mines in certifying farmers' applications for getting licenses to handle explosives. Unusual projects for farm officials, ordinarily—but not in wartime.

The War Production Board issued a conservation order which restricted the sale or use of scarce materials within certain limits. State and County War Boards were designated to furnish recommendations so WPB could determine eligibility for applications to construct farm buildings and "off-the-farm" facilities such as those for storage, processing and marketing agricultural products.

Farm machinery procurement and repair programs were important items on War Board work sheets. Campaigns for collection of scrap iron, steel, rubber, and fats have all been in the day's run. Much time has been devoted to programs for increased production of commercial vegetables such as tomatoes and peas, and to the farm garden project. War Boards worked hand in hand with the Office of Defense

Transportation on a program to conserve farm transportation facilities.

EARLY in 1942, USDA War Boards, upon a Department of Justice request, assisted in informing enemy aliens located in rural areas about requirements for identification certificates.

Week by week, new activities in conjunction with other groups or pertaining strictly to agriculture, have spread-eagled USDA War Board activities.

Projects have ranged from surveying the nail supply situation to providing data on fuel oil and kerosene requirements for curing flue-cured tobacco; and from disseminating information on the availability of calcium arsenate to aiding in a campaign to ascertain the location of unused farm power plants for the Army.

War Board personnel have cooperated with the U. S. Treasury in drives to sell stamps and bonds. They have campaigned for conservation of such articles as burlap bags and egg cases. They have worked on various phases of storage, transportation and labor problems. There has been the continuous job of perfecting War Board organization and coordinating production by actual movements in the field and through educational facilities.

INFORMATION has necessarily been a big part of the War Board job. Through information campaigns, rural people have been helped to understand the need for a program to keep run-away prices from interfering with the war effort. Background data for an understanding of the sugar situation have been circulated. Exhibits on nitrogen fertilizer were distributed. War Boards in all areas where hog production is commercially important have campaigned for earlier marketing and heavier feeding in line with war needs. Special cooperation has been given to Victory Food Specials to promote the sale of cheese, tomatoes and

peaches and other foods in abundant supply. Motion pictures, mats, posters and various publications have been sent all through the rural areas.

Pearl Harbor did not catch farmers unprepared, for the War Boards were ready to take leadership and channel farm resources into war uses. The job of leadership in the most crucial

struggle still ahead finds the War Boards tested by nearly a year and a half of hard experience, and ready to assume ever greater responsibilities in dealing with problems of war in farm production and farm affairs.

FRED S. WALLACE,
*Special War Board Assistant
to the Secretary.*

War Risk Insurance for Farmers

SINCE July 1, 1942, farmers in continental United States, Alaska, Hawaii, Puerto Rico, the Canal Zone, and the Virgin Islands, may, at small cost, insure their farm properties against loss or damage resulting from enemy attack or from action by our own military forces in resisting attack. The coverage, which is purely voluntary, may be obtained through insurance companies and their agents, which are authorized to act for the War Damage Corporation. The Corporation acts as guarantor and administrator but utilizes the facilities of nearly 6,000 fire insurance companies and approximately 150,000 local agents and brokers in selling the insurance. The policyholder may look to the Government for reimbursement of losses, but his immediate war insurance relations are with private companies and their agents or brokers which act as agents for the Corporation.

For a cost of 10 cents per \$100 of insurance, a farmer may insure his dwelling, barn (and their contents), livestock, farm equipment, and trucks for their full value for a year. He may insure his crops or orchards against damage for only 5 cents per \$100. In case more than \$100,000 worth of insurance is obtained, the rates are graduated upward for the portion above the first \$100,000. These same rates apply throughout the United States and its territories. A minimum premium of \$3 per policy applies to farm property insured for less than \$3,000 and to crops and

orchards insured for less than \$6,000. Since a farmer's buildings and chattels are insured under a different policy from that under which his crops and orchards are insured, he is subject to a minimum charge of \$6 if he elects coverage under both policies.

When this article was written, in late August, an interpretation had not yet been made as to whether or not orchard protection is extended to the value of trees as well as to the fruit on the trees. The question of protection of investment in the tree had arisen in connection with insurance on a lemon orchard in California.

SEVERAL crops maturing at the same or different times may be covered under one policy, but the maximum term of any policy is one year. A farmer may take any amount of insurance up to the full value of his property or crops. In case of loss or damage, he need not bear a part of the loss himself, as in some types of coverage where a moral hazard might be involved. Consequential or indirect losses, such as occupancy of dwellings, use of buildings, and rent and rental values on land, are not covered. In case of damage to his property or crops by contending forces, the farmer will file a claim with his insurance company which, through its claim adjustment bureau, will investigate the claim and report its findings to the War Damage Corporation for further investigation or payment.

The agent who completed the application for insurance receives 5 percent of the premium payment as a commission, with a minimum fee of \$1 per policy. An additional 3½ percent goes to the company which issues the War Damage Corporation policy, to pay overhead charges, with a minimum fee of 50 cents per policy. It was not contemplated that the insurance company's 3½ percent would permit any profit. In fact, it is subject to adjustment upward or downward depending on whether or not it is found to be inadequate or too generous for insurance company expenses. Participating companies will be permitted to divide 10 percent of the profits shown by the War Damage Corporation after the war, with a top limit of 20 million dollars going to all companies combined. Conversely, the companies would absorb up to 10 percent of any deficit after the war up to 20 million dollars.

THE Federal Crop Insurance Corporation has ruled that crop losses caused by invasion forces or the Nation's defenders are covered under the insurance policies of wheat and cotton farmers. Since the contract covers all "unavoidable" losses, the interpretation has been made that yield losses due to contending forces are covered the same as losses due to drought, storm, excessive rainfall, insects, hail, frosts, etc. Obviously, the specific wheat or cotton crop that has been insured is all that is protected. Other crops and the farmer's other property would have to be insured with the War Damage Corporation in order to be covered.

The yield insurance contracts of the Federal Crop Insurance Corporation are for 75 (or 50) percent of the average yields. This means that a farmer must stand the first 25 (or 50) percent loss in yield from all causes, including war damage. (He might, if he chose, insure this portion against war damage with the War Damage Corporation.) The Federal Crop In-

surance Corporation would reimburse him for the remainder of the loss, or the difference between his actual yield and his insured yield. Due to the moral hazard involved, the Federal Crop Insurance Corporation cannot insure farmers for the full value of their wheat and cotton crops, as is done by the War Damage Corporation in the case of losses attributable to invasion or defense. The crop insurance policy covers losses only until the crop is harvested (with one exception). Wheat or cotton stored on the farm, therefore, is not covered.

Losses due to maneuvers, bombs dropped inadvertently from our own planes, and other damage not caused by invading or conflicting forces are not covered by the policies of either the War Damage or the Federal Crop Insurance Corporations.

IN England the war-insurance system is based on the amount of annual rent received by the landlord for his farm, since approximately three-fourths of the farms in England are rented. Insurance is not compulsory unless the annual rent or the assessed annual value is more than £50, or approximately \$200. The landlord must insure his buildings and equipment of a permanent nature for at least twice the annual rent. The tenant would pay for the insurance on his crops, machinery, livestock, and other movable articles. Each would submit a list of the items to be insured and the valuations placed thereon. Insurance need not be up to the full value of the property or chattels. Losses are paid up to the amount of the insurance without taking into consideration whether or not the full value was insured. Until April 1942 a premium rate of approximately \$1.50 per \$100 per year applied to all farm properties; since April the rate has been 50 cents per \$100. The rate is the same throughout England. Like in our own plan, the farmer does not have to bear a first loss himself. The British Government does not pay indemnities until

after the war, unless it is determined in the national interest to do so. Deferred payments accrue interest at 2½ percent a year. The plan, administered by the Board of Trade, is operated through insurance companies.

AS with the British plan, it is likely that the provisions of our own war insurance plan will be amended again and again, until the war is over. It has been suggested that the War Damage Corporation should provide protection against damage done by our own planes, regardless of whether or not we are attacked, on the assumption that every activity of the Army, Navy, and Air Force is in reality a part of resistance to enemy attack. On the other hand, military aircraft operate in peacetime; and a farmer who has insurance against attendant hazards then, might be protected in wartime if the precedent established by the Supreme Court decision in the *Marine case of Queen Insurance Company vs. Globe and Rutgers*, decided after the last war, were followed. In that case it was decided that "neither the exaggeration of a hazard which exists in peacetime

nor the removal of a peacetime safeguard constitutes a war risk." Under that doctrine, in effect in England, the mere fact that aircraft are more numerous or may operate with less caution in wartime than in peacetime probably could not be used by an insurance company to avert liability.

During the period between December 1941 and July 1942, when "free" insurance was in effect, some damage was done on our West Coast, principally in Los Angeles, by falling shells and shrapnel from our own antiaircraft guns. Some claims were filed as a result. The sabotage of farm property and food and fiber stored on the farm and in warehouses and elevators might be more dangerous than an invasion just now. However, it would be difficult to determine whether or not such "secret" acts, in respect to farm properties, were really sabotage. If proof were lacking, the fire insurance company probably would be liable under its regular coverage. War risk insurance was intended primarily to furnish a coverage which was not available through private insurance companies.

D. F. SMITH and RALPH R. BOTTS

Computing Indexes of Prices Paid

WHAT is the index of prices paid by farmers for commodities? It is an attempt to measure as accurately as possible the over-all changes that occur in the level of prices charged to farmers and their families for the articles they must buy to live and to maintain farm production.

The first step in the construction of the index is to collect the prices charged to or paid by farmers for the flour, sugar, overalls, stoves, automobiles, plows, and many other commodities they buy. Obviously, prices cannot be determined for each and every one of the hundreds of commodities and services purchased by farmers, nor is it necessary if the prices for the important articles, accounting for

the greater part of the farmer's expenditures, are regularly determined. Altogether, price data for 174 articles purchased by farmers, 86 used in living and 88 for farm production distributed so as to represent each major group of commodities, are covered in the current index of prices paid. Prices of these commodities are reported periodically to the Department of Agriculture by more than 10,000 retail merchants serving the farm population in all parts of the United States. Prior to 1923 prices were collected annually. Prices of most commodities have been reported quarterly since 1923. Monthly prices of feed are available in recent years. For commodities other than feed, sufficient

data are also obtained from supplementary sources to allow the monthly movement of prices to be estimated. From these data, average prices for the United States as a whole are computed. Commodities for which prices are obtained change occasionally as a result of the outmoding of some commodities, the introduction of new commodities, and the general trend of technical change and improvement.

Average prices for each commodity are combined or arranged by major groups such as food, clothing, and farm machinery. Prices for the different commodities are multiplied by the average quantity of each commodity purchased per farm during the 6-year period 1924-29, which was the most recent period of relative economic stability at the time this index was being developed. The same quantity weights are applied to the prices for all periods of time and, therefore, changes in the index reflect only changes in prices and not changes in

quantities purchased. The values of the different commodities for each period of time are added, giving a total value for each group of commodities. The total values are expressed as percentages of the average value of the same commodity groups in the base period 1910-14.

The commodity group indexes so computed are combined into over-all indexes of prices paid for items used in living and items used for farm production by weighting each group according to its relative importance in the average expenditures per farm from 1924 to 1929. Similarly, the living and production price indexes are combined into a single index and this index, together with indexes of interest on farm mortgages and taxes payable on farm real estate, converted to a per-acre basis, are combined into the index of prices paid by farmers for commodities, interest and taxes.

NATHAN KOFFSKY.

BILLIONS OF BABY CHICKS

Rapid expansion of the commercial hatchery business is indicated by Department of Agriculture estimates that the hatch this year will total nearly 1.2 billion chicks. This compares with less than 1.1 billion in 1941, and the preceding high of 910 million in 1939. Increases have been greatest the last 2 years in the North Central States. The hatchery industry went into a period of depression after 1930, but began to recover in 1935, and by 1939 was well on the way toward the billion-chicks-a-year level. Production declined in 1940, but then spurted in order to satisfy wartime requirements for poultry and eggs.

Department poultry specialists say that other reasons for the big increases in recent years include greater specialization in the poultry industry and rapid growth of the commercial broiler industry. Ten years ago the farmers bought or had custom hatched less

than half the chicks they raised. Now they buy or have custom hatched nearly 80 percent of all the chicks they raise. And last year more than 163 million commercial broilers were produced, or 127 percent more than the average for the 7 years 1934-40. Total this year is above 200 million.

Commercial hatcheries in the North Central States now produce about half of the United States total. Output here in 1941 was 590 million chicks as compared with 388 million in 1930. Runner-up was the South Central group of States with a total of 109 million in 1941 as compared with 66 million in 1930. Production in all regions except the Pacific and Mountain States was larger in 1941 than in 1930. Leading producing States in 1941 were Indiana (94 million), Iowa (83 million), Missouri (81 million), Illinois (78 million), Ohio (62 million), Minnesota (50 million).

Agricultural Manpower

IMPROVED employment conditions in cities mean an increased demand for the products of the farm. The demand is not only for the food and fiber produced on farms, but fully as much for the manpower available on farms. Farm families are generally larger than families in towns and cities. Each year there are many more farm youth reaching maturity than are needed to replace the older ones who die or retire. During the depression years only a part of the excess moved to towns and cities, the others stayed on farms. By 1940 the farm population included about 2.5 million persons who would not have been there had migration continued at the same rate as during the 1920's.

But since early 1940 there has again been an insistent demand for the manpower on farms, from industry and the armed forces. From the time the last census was taken, only a month before the fall of France, supplying this demand decreased the farm population from 30.2 million to 29.1 million at the beginning of 1942. Since then there has been further migration from farms. The net movement from farms to towns and cities was about 1,000,000 persons during 1941; during 1940 it had been only about 570,000. The volume of migration indicated by these figures is large in comparison with the average for 1930-40, which was only 350,000 per year.

THE net migration from farms between April 1940 and July 1942 was approximately 1.6 million persons, but, as usual, there were more births than deaths to offset partially the losses by migration. The migrants included nearly half a million young men who joined the armed forces, and in addition some 900,000 workers or potential workers, plus some children. Migrants from farms were not the only losses to the agricultural labor supply

during this period; there was also a considerable number of persons who took nonagricultural jobs but continued to live on farms. In April 1940, the Census reported that about one out of five employed workers living on farms was working at some non-agricultural job, a total of 2,070,000 persons. By the middle of July 1942, some 1.4 million more persons living on farms were working at some non-agricultural job as a major occupation. Of course, there are also some persons working on farms who do not live on farms, but the number of these is less than the number of farm residents working at nonagricultural occupations both in the slack and in the peak season in agriculture. Altogether, the net shifts in occupation and the migrations which have occurred account for the loss of approximately 2 million persons from the on-farm agricultural labor supply between April 1940 and July 1942.

This does not mean that there are now 2 million fewer workers on farms; as a matter of fact, these losses have been largely replaced. Employment on farms in the middle of 1942 was only slightly less than at the same time in 1940. Enough young men reached working age to provide 400,000 more than were needed to replace the losses of older men by death; there are fewer unemployed on farms than there were in 1940; there were more women and children working on farms in 1942; and the number of persons working on farms who lived in villages and cities had not decreased.

THE migrants from farms during 1941 did not come in the same proportions from all parts of the country. Rates of migration from farms were highest in the northeastern industrial States, where a large proportion of current industrial employment is located. Rates were also higher than

average in the West North Central States, including the Northern Great Plains, where there again has been a considerable out-migration. In terms of rates, the migration from farms has been least in the East South Central States, which include a large part of the Southern Appalachian Mountain area and which was one of the areas of rapid growth of farm population during the 1930's. There is some evidence that the migration has been coming in larger proportions from the more favorably situated rural areas, those in which the level of production and income has been high, and in which young people have had superior educational facilities. A special study in Kentucky showed that the rate of migration from farms was lowest in the southeastern, mountainous section of the State. The same area in 1940 had a considerable volume of underemployed persons on farms and in the villages. Apparently the available supply of rural-farm manpower in that area has been only partially tapped so far.

A map of rates of migration from farms would show that within any region the rates of migration varied widely, some local areas contributing more heavily than others. Farms in areas immediately adjacent to war industry plants or major construction projects experienced a considerable movement from farms. More than 30,000 farm families have been displaced through the purchase of land for military purposes.

HEARINGS before the Tolan Committee and information from other sources indicate that a large proportion of the current shifting about of population in the United States involves people who are leaving one city to go to another. Recent studies of migrants into war industry areas showed that in half the survey cities an average of not more than 9 percent of the migrants had come from farms, but that the rates varied from 0.5 percent in Saginaw, Michigan, to 21 percent in Detroit, Michigan. Few of the mi-

grants had traveled far, the migrants to most of the cities included in the survey had traveled an average distance of less than 125 miles. At the same time, however, the migration from farms to nearby towns and cities supplied farm boys and girls to fill the vacancies created when village youth moved to war industry areas.

A part of the explanation for the source of war time migrations is found in the population trends in the 1930's. The number of people living on farms in 1940 was the same as in 1930, but the number of persons in the rural nonfarm areas increased by 14.2 percent. While a part of this increase was due to the increase in the smaller suburban places in the vicinity of larger cities, there were many instances of increase in smaller towns which resulted simply from the fact that unemployed and underemployed people were moving into them. Unemployment in rural nonfarm areas in 1940 was two times as great proportionately as on farms and was slightly larger than the rate in cities. When the urgent need for workers developed with the expansion of the defense and war production programs, there was a considerable volume of population available in rural nonfarm areas.

PRESENT indications are that there will be a continuation of a considerable migration from farms in order to meet the demands of both the armed forces and industry. The picture at the present time includes many diverse situations. At the one extreme are the communities which have experienced so much migration from farms that they are facing serious difficulties in finding needed replacements for the farm workers who have been lost. At the other extreme, there are farming areas in which there is still a considerable volume of underemployment. Full utilization of the manpower on the nation's farms calls for effective methods of drawing into more productive activity those farm workers who are still underemployed.

CONRAD TAEUBER.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of industrial workers (1935-39 = 100) ²	Cost of living (1935-39 = 100) ³	Whole-sale prices of all commodities ⁴	1910-14=100			Prices paid, interest, and taxes	Farm wage rates
					Prices paid by farmers for commodities used in—				
					Living	Production	Living and production		
1925.....	90	126	125	151	163	147	156	170	176
1926.....	96	131	126	146	162	146	155	168	179
1927.....	95	128	124	139	160	144	153	166	179
1928.....	99	127	123	141	160	148	155	168	179
1929.....	110	134	122	139	159	147	154	167	180
1930.....	91	110	119	128	150	141	146	160	167
1931.....	75	85	109	107	128	123	126	140	130
1932.....	58	59	98	95	108	109	108	122	96
1933.....	69	61	92	96	108	108	108	118	85
1934.....	75	76	96	109	122	123	122	128	95
1935.....	87	87	98	117	124	127	125	130	103
1936.....	103	100	99	118	123	125	124	128	111
1937.....	113	117	103	126	128	136	131	134	126
1938.....	89	91	101	115	122	125	123	127	125
1939.....	108	105	99	113	120	122	121	125	123
1940.....	123	119	100	115	121	124	122	126	126
1941.....	156	163	105	127	131	131	121	134	154
1941—August.....	160	174	106	132	134	132	133	130	.....
September.....	161	177	108	134	136	135	136	138	.....
October.....	163	178	109	135	140	138	139	141	165
November.....	166	180	110	135	142	139	141	143	.....
December.....	167	187	110	137	143	141	142	143	.....
1942—January.....	171	196	112	140	146	145	146	146	166
February.....	172	194	113	141	147	147	147	147	168
March.....	171	185	114	142	150	149	150	150	.....
April.....	173	202	115	144	152	149	151	151	167
May.....	174	208	116	144	153	150	152	152	177
June.....	176	216	116	144	154	150	152	152	.....
July.....	180	227	117	144	154	150	152	152	183
August.....	.....	.....	.....	.....	154	150	152	152	202

Year and month	Index of prices received by farmers (August 1900-July 1941=100)							Ratio prices received to prices paid, interest, and taxes	
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals ⁴	Dairy products	Chickens and eggs		
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	84
1927.....	128	128	144	121	140	155	144	139	86
1928.....	130	152	176	159	151	158	153	149	89
1929.....	120	144	141	149	156	157	162	146	87
1930.....	100	102	162	140	134	137	129	128	79
1931.....	63	63	98	117	92	108	100	87	62
1932.....	44	47	82	102	63	83	82	65	53
1933.....	62	64	74	105	60	82	75	70	59
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	144	131	122	122	91
1941—August.....	99	128	100	133	155	135	130	131	96
September.....	106	150	89	145	163	140	141	139	101
October.....	101	144	107	164	154	145	146	139	99
November.....	103	136	98	147	149	148	157	135	94
December.....	112	138	98	162	157	148	163	143	100
1942—January.....	119	143	102	204	164	148	147	149	102
February.....	121	150	98	161	173	147	135	145	99
March.....	122	151	111	136	180	144	120	146	97
April.....	120	158	118	158	190	142	131	150	99
May.....	120	159	131	152	189	143	134	152	100
June.....	116	153	148	169	191	141	137	151	99
July.....	115	155	131	200	193	144	145	154	101
August.....	115	151	125	256	200	151	156	163	107

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Adjusted for seasonal variation. Revised November 1941.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1925=100, divided by its 1910-14 average of 68.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

FOOD OUTPUT NEAR CAPACITY

THE

AGRICULTURAL

• SITUATION •

OCTOBER 1942

A Brief Summary of Economic Conditions

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RECORD-SMASHING HARVESTS and price stabilization were again headline news in October. Problems of labor, storage, transportation and processing are gaining more and more attention, and 1943 production plans are being developed. * * * Yields and production are setting new records with small grains already in, cotton picking passing the peak, peanut harvest nearly over and corn and soybean harvests underway. Spring pigs are moving to market and feeder cattle into the feed lots. Cash income from marketings will be the highest on record. Farmers have worked strenuously, aided by good weather, to produce huge increases in feed and oil crops and animal proteins needed by free men fighting to stay free. They will be hard put in 1943 to exceed or even equal 1942 production. * * * The drive to hold down the cost of living entered its current phase September 7 when President Roosevelt asked Congress for specific authorization to stabilize farm prices at parity or recent levels, whichever is higher. This Congress granted October 2, with the provision that price ceilings should be raised if they did not reflect increases in farm labor and other costs since January 1, 1941.

Stability for the Farmer

PROTECTION of farmers both now and after the war along with protection of consumers during the war is the keynote of the program to stabilize prices of farm products.

In World War I, the first year of the United States' participation was the most favorable for farmers from the standpoint of the relation between prices paid and prices received, even though prices received by farmers did not reach their peak until May 1920, a year and a half after the Armistice.

Late 1917 or early 1918 would have been the ideal time for a general price freeze—probably February 1918, 10 months after the United States' entry into the war. In that month, the index of prices received by farmers reached 200. It was not that high again until August. No monthly record is available of prices paid by farmers in 1917 or 1918, but the yearly index indicates prices paid by farmers were advancing more rapidly than prices received in 1918. From then until the crash in 1921, the ratio became more and more unfavorable to farmers.

The index of prices received by farmers reached a peak of 244 in May 1920, but the buying power of farm products was less than in 1917. A year later the index of prices received had tumbled to 113. Prices of commodities bought by farmers fell more slowly and not as far.

THE price trend in World War II started along much the same pattern. The buying power of farm products jumped from 71 in August to 78 in September 1939, remained nearly unchanged until December 1940, and then increased from 80 in March to 101 in September 1941. From then on until after the general price-control order became effective, prices paid by farmers increased just as rapidly as the average of prices received.

The experience of the last war indicates that nearly all farmers would gain

Under October 1942 legislation, price ceilings for farm products cannot be set below parity or below the highest market level between January 1 and September 15, 1942, whichever is higher. If such ceilings are too low to reflect increases in farm labor and other costs since January 1, 1941, the President is directed to raise them.

The act calls for loans at 90 percent of parity for cotton, corn, wheat, rice, tobacco, and peanuts, to establish price "floors" for these products. For wheat and corn, however, the President is given discretion to hold the loan rate at 85 percent where this is necessary to prevent increases in prices of feed for livestock and poultry.

more by having the prices they pay and the prices they receive stabilized at present levels during the war and as long as necessary afterward, than to have them repeat the losing race from 1918 on to the disastrous plunge in 1921.

In his radio address September 7, President Roosevelt said:

"I think I know the American farmers. I know that they are as wholehearted in their patriotism as any other group. They have suffered from the constant fluctuation of farm prices—occasionally too high, more often too low. Nobody knows better than farmers the disastrous effects of wartime inflationary booms and post-war deflationary panics.

"I have today suggested that the Congress make our agricultural economy more stable. I have recommended that in addition to putting ceilings on all farm products now, we also place a definite floor under those prices for a period beginning now, continuing through the war, and for as long as necessary after the war. In

this way we will be able to avoid the collapse of farm prices which happened after the last war. The farmers must be assured of a fair minimum price during the readjustment period which will follow the excessive world food demands which now prevail.

“WE must have some floor under farm prices, as we have under wages, if we are to avoid the dangers of a post-war inflation on the one hand, or the catastrophe of a crash in farm prices and wages, on the other.”

Secretary Wickard commented as follows on the President's message to Congress:

“The President's request for stabilization of wages, prices, and profits will have the approval of an overwhelming majority of the American people, including the farmers.

“In two previous statements, I have said that I thought section 3 of the Price Control Act no longer was needed to protect agriculture. I am sure that it should not be permitted to block the President's efforts to act on the entire economic front.

“I think it extremely significant that the President has in mind stabilization for agriculture in the post-war period. Speaking from experience, I believe that most farmers are getting along fairly well now and that they will go ahead confidently if they feel they will be protected after the war ends.

“I am glad that the President recognizes the importance of agricultural production and stressed the increasing seriousness of the farm-labor situation.”

Commodity Reviews

PRODUCTION: 1942

MONTH after month the Crop Reporting Board has raised its estimates of prospective 1942 crop production. Because of continuing favorable weather and high yields, the September report showed another boost. Aggregate crop production was estimated at 14 percent more than last year, and 13 percent ahead of the former all-time peak reached in 1937. And Secretary Wickard said that if the weather is favorable during September, total production may be even larger.

September estimates for major crops were 3,016 million bushels of corn against 2,673 million in 1941, 981 million bushels of wheat against 946 million, and 14 million bales of cotton against 10.7 million. Increases are general this year for all crops. For 1942 as compared to 1941, figures for oats were 1,353 million bushels and 1,176 million, for barley 419 million bushels and 359 million, for rice 72 million bushels and 54 million. The

estimated production of 21.6 million bags of dry edible beans was about 3 million bags over the previous record crop last year, and the expected dry field pea production of 7.3 million bags approaches twice that of 1941. Estimates for soybeans for beans have been raised to 211 million bushels, almost twice the 107 million produced in 1941, and for peanuts to 2,930 million pounds compared with 1,475 million last year.

The September report contained an impressive list of crops which have already set or are expected to set new high records for yields per acre. Included were corn, wheat, rye, cotton, hay, beans, peas, potatoes, several vegetables, and quite probably fruits as a group. In addition, near-record yields were indicated for oats, barley, soybeans, sugar beets, and tobacco. Together, these crops occupy 93 percent of the total crop acreage. Favorable weather, improved varieties, and progressive mechanization coupled with better farming, are credited with this year's high yields.

CAPACITY: 1943

Technicians of the Department of Agriculture have been aided by representatives of farmers throughout the Nation in studying potential farm production to meet war needs in 1943. Conclusion is that total farm production this year, aided by favorable weather, has about reached the maximum we can plan for in 1943. But within this total production capacity, we can make shifts to get more of the crops needed most, and less of the crops not as essential to the war. More vegetable oils can be secured by further shift from cotton to peanuts, from feed grains to soybeans, or more beef and pork can be had by shifting from oil crops to feed grains. Selective increases can be made for beef, pork, or dairy products to make most effective use of any given supply of feed.

Selection of crops whose production should be specially encouraged is a difficult matter, however, for war demands are large for almost all farm products. The only commodities in special abundance are wheat, cotton, and tobacco, and even for these, increased production of certain types or qualities is desirable. And to secure total production as large as this year farmers will have to overcome difficult obstacles in shortages of labor, materials, and equipment, and weather will again have to be favorable. Farmers face a big job in war production next year.

LABOR: Harvest

Farm employment figures on September 1 showed almost as many workers on farms this year as last, although harvest ranks were filling up somewhat slower than in 1941. While the total number of workers remains near the average of former years, the composition of the labor group is changing. With hired workers being 28 percent of the 11.4 million workers on farms in September, the number of family workers for this date was the lowest on record. Among the hired

workers were many inexperienced men, women, and children.

With harvest operations getting in full swing, farmers were planning full use of every resource at hand, including all available men, women, children, old folks, townspeople, exchange labor, and the efficient use of machinery. The Department of Agriculture is aiding, insofar as funds permit, by moving workers to areas where they are most needed. Importation of 1,500 Mexican laborers to help in the California sugar beet harvest was approved by the War Manpower Commission. So far, little crop loss has been reported as a result of labor shortages, although there are minor losses in some areas and general inconveniences.

Possibility is that labor shortages for moving and processing the crops after they are harvested may result in greater difficulties than scarcity of labor for harvest. Marketing and transportation facilities will be handling the largest farm production of all time, and their labor will be as scarce, perhaps more scarce, than labor hired by farmers. All the way down the line to the consumer, shortages of labor, materials, and equipment must be overcome to complete the production farmers have so well begun.

FARM INCOME: Up

After September reports of larger crops following the August increase in prices, BAE economists revised upward their estimate of cash income for farmers in 1942. Their estimate is now 15 billion dollars; this is about a billion more than was estimated in mid-summer, and a new record high. The previous high was 14.4 billion dollars of cash income in 1919. Gross farm income this year, which includes government payments and values of goods and services supplied by the farm in addition to cash receipts, is expected to exceed 18 billion dollars. Net income to farm operators, which allows for production costs, will be an all-time high of about 9.8 billion dollars.

Index Numbers of Prices Received and Paid by Farmers

Year and month	Prices received	Prices paid, interest and taxes	Buying power of farm products ¹
1941			
January	104	128	81
February	103	128	80
March	103	129	80
April	110	129	85
May	112	130	86
June	118	132	89
July	125	133	94
August	131	136	96
September	139	138	101
October	139	141	99
November	135	143	94
December	143	143	100
1942			
January	149	146	102
February	145	147	99
March	146	150	97
April	150	151	99
May	152	152	100
June	151	152	99
July	154	152	101
August	163	152	107
September	163	152	107

¹ Ratio of prices received to prices paid, interest and taxes.

PRICES: Same

The average of prices received by farmers in mid-September was 163 percent of the 1910-14 base period, the same as a month earlier. As greater numbers of livestock came to market in the fall upturn, declines in meat animal prices offset rises for grains and general crops. Compared to mid-August, prices on September 15 were higher for wheat and other grains, but slightly lower for hogs, cattle, and some livestock products. Prices paid by farmers, including interest and taxes, continued at 152. The ratio of 107 for prices received-paid was the same as on August 15, and the highest since just after the first World War.

FARM MACHINERY: Rationing

Rationing of farm machinery has become a responsibility of the Department of Agriculture. Materials avail-

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average August 1909 to July 1914	September average 1909-13	September 1941	August 1942	September 1942	Parity price September 1942
Wheat (bushel).....	cents..... 88.4	87.7	95.8	95.4	102.6	134.4
Corn (bushel).....	do..... 64.2	69.6	70.8	83.4	82.6	97.6
Oats (bushel).....	do..... 39.9	38.8	39.9	42.6	43.3	60.6
Rice (bushel).....	do..... 81.3		89.1	102.9	154.4	123.6
Cotton (pound).....	do..... 12.4	12.2	17.53	18.03	18.59	18.85
Potatoes (bushel).....	do..... 69.7	74.4	163.8	115.4	107.7	(*) 109.2
Hay (ton).....	dollars..... 11.87	11.39	7.94	8.89	9.03	18.04
Peanuts (pound).....	cents..... 4.8	4.7	4.49	5.99	6.69	7.30
Apples (bushel).....	dollars..... .96	.71	.85	1.16	1.20	1.46
Hogs (hundredweight).....	do..... 7.27	17.51	11.24	14.13	13.57	11.05
Beef cattle (hundredweight).....	do..... 5.42	15.34	9.32	11.30	11.17	8.24
Veal calves (hundredweight).....	do..... 6.75	16.73	11.20	12.91	13.00	10.26
Sheep (hundredweight).....	do..... 4.53	14.25	5.36	5.62	5.55	6.89
Lambs (hundredweight).....	do..... 5.88	15.48	10.09	12.07	11.92	8.94
Butterfat (pound).....	cents..... 26.3	25.8	36.8	40.6	42.9	(*) 39.8
Milk, wholesale (100 pound).....	dollars..... 1.60	1.59	2.42	2.53	2.62	(*) 2.50
Milk, retail (quart).....	cents..... 6.8	6.7	11.0	11.8	11.8	10.3
Chickens (pound).....	do..... 11.4	11.6	16.3	19.6	20.3	17.3
Eggs (dozen).....	do..... 21.5	20.5	30.3	32.2	34.7	(*) 37.3
Wool (pound).....	do..... 18.3	18.6	36.2	39.4	39.7	27.8
Tobacco:						
Flue-cured types 11-14.....	do..... 22.9		2.62	33.7	37.0	27.9
Maryland types 32.....	do..... 22.9		32.0	29.5	29.0	22.0

¹ Revised.

² Post-war base.

³ Adjusted for seasonality.

⁴ Retailed by farmers directly to consumers.

⁵ Base price crop years 1934-39.

⁶ Base price crop years 1919-29.

able for manufacture of farm machines and equipment are not sufficient to meet all demands of farmers. Rationing is needed to control distribution of the limited supply to assure its greatest possible contribution toward meeting farm-production goals.

Under the temporary rationing plan which took effect September 17, farmers need certificates to buy beet lifters, beet loaders, combines, corn pickers, disc harrows, feed grinders, fertilizer spreaders, grain drills, grain elevators, hay balers, lime spreaders, manure spreaders, milk coolers, milking machines, pick-up balers, potato diggers, shredders, and tractors (including garden tractors). Certificates to purchase these machines will be issued by county rationing committees, each made up of the chairman of the county AAA Committee and two other farmer members appointed by the County USDA War Board. Appeals can be taken to State USDA War Boards, and the administrator at the national level will be Fred S. Wallace, Special War Board Assistant to the Secretary of Agriculture.

Farmers can obtain purchase-certificates for rationed items only after showing that present equipment is not adequate, that needs cannot be met by purchase of used equipment, rentals or custom work, and that production of needed crops will suffer from failure to obtain the equipment.

MEAT ANIMALS: Autumn

Out-turn of meat is increasing seasonally as hogs from the record large spring pig crop come to market. Slaughter will be larger in the fall months than ever before, probably 25 percent more than last year in the October-December period. Peak of the market movement will come near the end of the year, and farmers are urged to market early or late in order to avoid unnecessary strain on market and processing facilities during the peak period.

Cattle slaughter stepped up in early September and will continue large the

rest of the year. Increase over last year is largely in range and short-fed cattle, and marketings of well-finished cattle may run somewhat smaller than in the autumn of 1941. Movement of stockers and feeders to the Midwest, however, indicates that fairly large numbers of cattle will be fed for at least a short period. Economists estimate that reduction of beef supply by shorter feeding will be small, and that use of the feed for hogs and other animals can more than offset the decreased production of this type of meat.

Market supplies of sheep indicate that herds have probably reached a peak and that some liquidation may be under way. Numbers slaughtered last summer were about 10 percent of total sheep and lamb slaughter, compared with a usual percentage of about 5 or 6 percent. The lamb crop was a little smaller this year than last, but BAE expects total supplies of sheep and lambs this fall to be larger than a year earlier.

OILSEEDS: Prices

Commodity Credit Corporation in early September announced a program to aid the processing of vegetable oils, to support prices to farmers, and to preserve price ceilings. Minimum prices at central markets for oilseeds, with allowances for types, grades, location, and time of year, are expected to result in average prices to farmers near \$1.55 a bushel for soybeans of oil varieties, over \$80 a ton for oil peanuts, \$47.50 a ton for cottonseed, and around \$2.25 per bushel for flaxseed. Crushers, after paying minimum prices, are assured prices for crude oil and oilmeal equal to the maximum prices for such products already established by OPA. To preserve price ceilings on manufactured products, Commodity Credit Corporation has arranged so that refiners will be able to buy crude soybean, peanut, and cottonseed oil at $\frac{1}{2}$ cent per pound under the minimum price received by crushers.

September estimates were that 4.4 billion pounds of soybean, peanut, cottonseed, and linseed oil could be produced from this year's crops, compared with 2.8 billion pounds produced last year. The next problem is to arrange crushing capacity to handle this enlarged volume. Present prospects are that about 4 billion pounds can be produced from crushings before October 1943. This production, plus about 8 billion pounds of animal fats, will make total supplies of fats and oils near 12 billion pounds—enough to satisfy our needs for 1942-43.

FEED: Estimates

Supplies of feed grains per animal unit were brought to the same level as last year by estimated increases recorded in the September crop report. Although there will probably be 10 percent more animal units on farms in 1942-43 than in 1941-42, the feed grain supply is expected to be 9 million tons more, and more feed wheat will also be available. Supplemented by ample supplies of hay, forage, and high-protein feeds, these grain stocks will permit the greatest feeding program of all time. Meat animals, milk cows, and poultry will be able to produce abundantly on these feed supplies. Although there is uncertainty among feeders regarding margins on livestock and livestock products because of present and potential price ceilings, needs of the Nation assure that means will be found to permit large and efficient utilization of all feed to produce livestock and livestock products.

WHEAT: Records

Record carry-over, record yield, and near-record crop add up to a total wheat supply for 1942-43 over 1.6 billion bushels. Last year the supply of 1.3 billion was a record. Domestic consumption this year, including wheat used as feed, may be 760 million

bushels, leaving about 850 million bushels for exports and carry-over. Storage facilities are strained, and agricultural technicians are seeking ways to move this wheat out of storage in country elevators in order to clear the way for handling crops next year. But the large supplies of wheat in the United States are a real bulwark against food and feed shortages during the war.

Recent estimates are that as much as 400 million bushels of this year's crop may go under loan. In mid-September, loan values at most important markets were above market prices, but economists expected the spread to narrow later in the season.

POULTRY: Marketings

October and November may be seasonal high points for the largest farm marketings of young chickens on record. Total supplies will be 20 to 25 percent more this fall than last, and prices are materially higher due to strong demand for meats. Supplies of turkeys will be about the same as last fall, and their prices will also be higher.

Secretary Wickard in mid-September asked poultrymen to increase production of poultry for meat to replace supplies of beef and pork now being diverted to military use and lend-lease. He asked for 200 million additional chickens to be marketed at about 3 pounds each, which can replace much of the estimated 3 billion pound deficit in meat for civilian demands. Fewer months are required to raise poultry to marketable size than for any other important type of meat product.

Egg production continues much higher than last year, with supplies remaining abundant for all consumers and processors. As the seasonal decline occurs, considerable quantities of eggs stored in the high-production period of spring and early summer are being withdrawn for use in drying plants. Egg prices are high and favorable to large production for fresh use through the fall months.

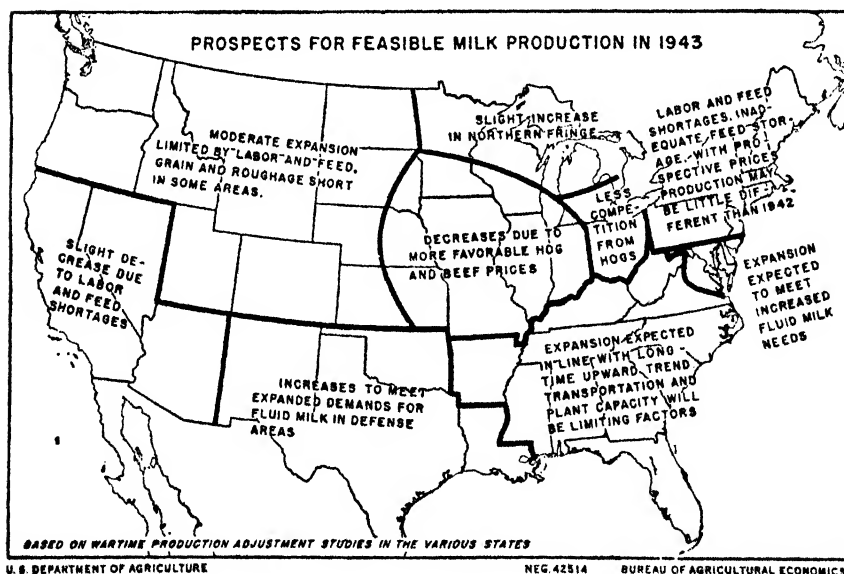
RICE: Supplies

More rice is being produced in the United States than ever before. Marketing was a little late in starting, but in late October was in full swing in both the South and in California. Domestic consumption for 1942-43, including United States and possessions, is estimated at about 43 million bushels. Supply will be about 73 million bushels—almost all of it new-crop rice since the carry-over was negligible. This will leave almost twice as much rice as last season for export and carry-over. Prices to farmers have been near the highest levels possible under the maximum prices established for milled rice at base points. Prospects are for a good price for the entire crop, well above Government price-support assured by loans at 90 percent of parity.

FRUITS: Processed

Carry-over of canned and dried fruits into the 1942-43 season was the smallest in recent years. Fruit crops are large this season, however, and near-record packs will be made which are expected to meet most demands. Prices of processed fruits are expected to average 20 to 25 percent more than in 1941-42.

The September estimate of the commercial apple crop was 126.1 million bushels, 4 million more than last year. Increased demand for apples and apple products will easily absorb the larger crop. Fixed prices have been established for dried apples at 19 cents per pound on the Pacific Coast and 2 cents higher in the Eastern States, packed in 25-pound or 50-pound wood boxes.



About 120 billion pounds of milk will be produced in 1942. Prospects are that in 1943 a little more milk will be produced, but the increase is not expected to add much more than 2 billion pounds to this year's production. More cows will be on farms, but it will be difficult to equal this year's production per cow. In areas where defense industries are concentrated, lack of skilled labor, plus favorable opportunities to use available feed for meat animals, will be the principal factors limiting maintenance or expansion of production.

MILK: Products

Most of the 4 billion more pounds of milk being produced in 1942 over 1941, is being used for greater manufacture of dairy products. Production of dried skim milk, evaporated milk, and American cheese has been stimulated by price supports and Government purchases to meet the needs of our fighting forces and allies. Stocks of these products are an important resource of this Nation in fighting the war, filling urgent needs abroad as well as helping to maintain the supply of protein foods at home. In addition, increased incomes and better diets in the United States are demanding more fluid milk and cream, ice cream, and butter. These latter products will not be in much more abundant supply this year than last. The

increased demand for butter is reflected mainly in higher price. Greatest encouragement just now is being given to production of dried milk and butter, and cheese, rather than to evaporated milk as was done earlier in the year.

POTATOES: Supply

September estimates of potato production at 378 million bushels relieve fears of a serious shortage. Acreage this year was little changed from last, but record yields of last year are being exceeded to produce a crop sufficient for our expected needs. Prospects are that in spite of the larger production, prices will remain higher than last season.

—C. A. BOONSTRA.

AGRICULTURAL PRODUCTION IN 1943

WE KNOW that we will need in 1943 all the meat, dairy, poultry, wool, hides, and byproducts that American farms can produce. We know, too, that we will need even more than this year's record production of vegetable oils to meet demands of war industry and shipments of food abroad. We know that rising incomes and war demands will require sustained large production of all foods including fresh vegetables for consumption and processing, dry beans and dry peas and potatoes, sugar and rice.

There is already more than enough wheat for food use, and next year's crop could be relatively small without hindering in any way the fighting efficiency of the Nation. But for the principal feed grains—corn, oats, barley, grain sorghums—the fact that this year's heavy feeding of livestock will cut into the reserves of the Ever-Normal Granary makes it desirable that feed-grain production in 1943 be at least large enough to avoid further

Farmers in 1942, through a combination of hard work and favorable weather, are surpassing their high goals for wartime production. Now that crops for 1942 have been largely produced and harvested, technicians of the Department of Agriculture are considering production needs and possibilities for 1943. Their data, collected during the summer months, are being combined in production plans for next year.

The accompanying articles are short summaries of detailed studies prepared in the Department of Agriculture, primarily for administrative use. The authors, whose task has been that of bringing together some of the highlights, feel that credit should be given to the hundreds of workers who took part in the surveys.—Ed.

depletion of reserves. At the same time, pasture and forage crops need to be maintained at a relatively high level. Present rates of consumption for cotton and tobacco indicate that

over-all production is fairly satisfactory although more long-staple cotton will be needed.

FARMERS generally know the importance of maintaining high rates of production in order to meet these wartime requirements, but they also recognize many "tight spots" created by our Nation-wide mobilization of resources. In the past, farmers have been able to maintain or increase production easily by planting more acres, making greater use of machinery, fertilizers, labor, and other materials. But the war will prevent use of these easier methods in 1943. Farmers are now asked to do more with less because rubber and many insecticide materials came from territory now in enemy hands; steel is needed in all phases of munitions production; nitrates are basic to gunpowder; our armed forces and war industries must have more manpower; and transportation is heavily burdened and handicapped by gas and rubber shortages.

Labor shortages are the most threatening of the 1943 obstacles to increased production. There will be a lack of experienced year-round hands, especially of those who are familiar with farm machinery, and also a lack of seasonal workers with specialized skills. Milkers, tractor drivers, sheep herders, lambers, shearers, woodsmen, mill hands, and cow hands are going to be scarce. Already the lengthening of the work day, the increasing dependence upon young, older, and inexperienced workers, and the marked increase in wage rates, indicate that the supply of experienced farm hands is being exhausted. In 1943 all community labor resources will be needed, and national programs will have to be stepped up to assure a definite supply of labor where it is most needed.

The labor situation will greatly increase the need for machinery in farming. But fewer new machines will be available to farmers than in 1942,

since metals are among the most critical of all war supplies. Only the most pressing demands will be met. Difficulties in obtaining replacement parts and tires may seriously hinder farm production. In addition, supplies of some fertilizers and insecticides, and of materials for farm construction, will be scarce in all parts of the country.

ASIDE from the physical problems of production, there are difficulties in sight for marketing products once they are grown. Transportation, storage, and processing facilities, all will be more affected by shortages in 1943 than in 1942. Then, too, there is the problem of adjusting prices among various products to encourage desired changes in the wartime farm plant. Along with this are the ever-present problems of tenure relationships and booming land values.

The need for overcoming these obstacles is clear, for we know that the United Nations could use even more farm products than are represented in the record crops and livestock production of 1942. It is evident that agriculture has a job of war production that matches the efforts of armed men and industrial workers engaged in this total war. Farmers know this and are grimly determined to do their job and do it well.

With all the demands on production, increases in vital war crops for 1943 must result from shifts of production capacity from less needed crops, or from increases in some areas of the Great Plains and South where additional cropland is available. To aid farmers in making these shifts, technicians of the Department of Agriculture have been developing estimates giving the possibilities for expansion, or contraction, of production throughout the country. Such estimates are necessary in the distribution among farms of the production jobs in 1943. They are also interesting as a picture of what production changes are possible in 1943.

IN general, these estimates are totals of what the Nation's 6 million farmers are likely to produce in 1943 in view of present expectations concerning prices, agricultural programs, manpower limitations, marketing outlets, and supplies of seed, feed, fertilizer, and other materials of production. These totals were built from the ground up by determining what would be the most reasonable reaction of farmers on the many different types of farms throughout the country. An interesting sidelight was an estimate of reserve capacities for the more important war commodities such as meat, milk, and vegetable oils. All estimates assumed normal weather conditions and average yields, factors which by themselves call for considerable increases in acreages in order to get crops as large as in 1942, since 1942 growing conditions were unusually favorable.¹

Production in 1943, based on these assumptions, is estimated at roughly the same as that now estimated for 1942. Within this total capacity, fortunately, there are reserves for critical commodities. For example, in the South more peanuts could be produced if less cotton were grown, or in the Corn Belt more pork could be produced at the expense of milk or soybeans. But the total agricultural plant can be increased only slightly in 1943 over 1942. Combined estimates for 1943 add 7 million acres to the 1942 figure of 340 million acres in intertilled crops, small grains, and hay crops. More than half of this increase could be in intertilled crops whose production per acre would be greater than the average of all cropland. However, this added cropland is scarcely enough to offset the lower yields which must be assumed for next year. To realize the same total output in 1943 will require more widespread use of efficient farming prac-

tices, substitution of more for less intensive crops, careful planting of crops on land best suited for their production, favorable weather, and vigorous programs to help farmers get labor, equipment, and materials.

GETTING down to specific farm products, it is estimated that compared with 1942 twelve percent more hogs could be produced in 1943. This estimate forecasts more hogs on farms and a combined spring and fall pig crop in 1943 about 7 million head over this year's estimated 105 million. Beef cattle numbers, however, are leveling off from the steady increase of the past several years. In the Corn Belt, cattle numbers and production will remain about the same as in 1942 because of increased acreages of corn and soybeans, and decreased acreages of hay and pasture. Nevertheless, because of increases in other areas and a greater slaughter of dairy cattle and calves, total slaughter of cattle and calves in 1943 may be somewhat above that of 1942.

With more milk cows on farms next year, a 3.5 percent increase in milk production over 1942 seems possible. This increase appears to be a maximum and it is threatened by poorer prospects for feed-milk price relationships and inadequate labor supplies. For eggs, estimated production next year is about 6 percent over the more than 4 billion dozen produced in 1942, since substantially greater numbers of layers will be on farms. Wool production in 1943 will be about the same as in 1942, but mutton and lamb will be in slightly greater supply.

Naturally, the maintenance of record-breaking production of livestock and livestock products will place a tremendous burden on feed production. Although corn acreage next year could be as much as 10 percent over 1942 in some areas, for the country as a whole the estimated increase is only about 1 percent. Other small grains—oats and barley—will be in competition with soybeans and corn

¹ For a more complete explanation of these estimates, see Agriculture's Wartime Production Capacity, BAE processed publication, August 1942.

and fewer acres may be planted next year than in 1942. Spring varieties especially will lose out as soybeans, corn, flax, and cotton increase their competition for land. Hay and forage crops are expected to approach those grown this year.

The total feed-grain situation will be eased somewhat by the large crops of 1942, increases in feeding of loan wheat, and greater seeding of acreage to wheat-rye or wheat-barley mixtures to be used directly for feed. The 1943 wheat crop itself, however, will almost certainly be considerably less than this year's bumper production, largely because of lower yields and general acreage reductions. Rice, another important food grain, was planted this year on most of its available acreage

AMONG the vegetable oils, increases in 1942 production were notable for soybeans, peanuts, cottonseed, and flaxseed. Studies indicate that it is possible to expand their acreage further in 1943. The South has more than 10 million acres of suitable peanut land, of which nearly 5 million were planted to peanuts this year. Considering the advisability of using much of this land for other needed crops and maintaining rotations, any

large increase over the 5 million acres planted this year would require an extremely intensive program to get peanuts in preference to competing crops. More soybeans could be grown next year, but increases in this oil crop would come largely at the expense of feed crops and livestock. Slight increases also are possible for flaxseed acreage, although not sufficient to assure higher production than that resulting from extremely favorable yields in 1942.

Cottonseed production rests largely on decisions made in regard to cotton lint production for 1943. More long-staple upland varieties are definitely needed and 1943 acreage possibilities for these types are estimated at about 200,000 acres more than the 1.6 million this year. American-Egyptian cotton was increased nearly to its maximum acreage in 1942.

Possibilities for other crops are not greatly different from the 1942 pattern of production. In total, they add up to a feasible total production in 1943 of approximately the level of 1942, but the feasibility can become a reality only by a concerted effort to make the most effective use of our war-limited resources.

—H. R. TOLLEY.

Northern Dairy Region

AGRICULTURAL commodities needed most in 1943 will include several items that are the principal sources of agricultural income in the Northern Dairy Region (Lake States and Northeast). Needs will be as great or greater next year for virtually all types of crops or livestock produced in this region.

This situation indicates that no great change in the pattern of agriculture is likely here, as it is in some regions where new crops are being produced for the first time; and the predominance of livestock production

makes it relatively difficult to make rapid shifts between present enterprises. It also means that the extent to which the production of any one product can be increased by shifting resources from some nonwar enterprise is narrowly limited.

The significance of restricted supplies of productive resources—such as labor, machinery, fertilizer, building materials, and transportation facilities—is becoming increasingly important. Where supplies are limited even quite favorable feed-product ratios will not further increase production. The major industrial area of the Nation is in or near the Northern Dairy Region, which makes the securing of sufficient farm labor especially

difficult. Restrictions on the construction of new processing equipment will limit outlets for products such as milk and sugar beets in some areas.

ALLOWING for these influences, production for 1943 can be only moderately above that achieved this year. In fact, the unlikelihood of as favorable weather next year as this indicates that even with some acreage expansion, the production of certain crops may not be as large.

Milk production over the entire region in 1943 may just exceed the record output in 1942, an increase in the Northeast offsetting a small decline in the Lake States. The number of milk cows is expected to increase, but milk production per cow may decline in view of reduced feed supplies within the region and the relative profitability of using larger quantities of feed for hog production in the principal feed-producing areas. Supplies of fertilizer for pasture maintenance will be restricted in 1943, and shortages of labor will be of paramount importance in many localities.

Heavier grain feeding will be necessary if milk production is to be increased, and special feed programs may be needed to make feed available at relatively low prices, particularly for dairymen who are increasing production. For the country as a whole, it has been estimated that the feeding of 1.5 million tons of soybean oil meal and feed wheat would expand production in the coming year by nearly 3 percent. Roughage supplies appear adequate to supplement the additional grain feeding needed for a similar percentage rise in the Northern Dairy Region.

Further increases in production could be expected if shortages of supplies make it necessary to relax restrictions enough to encourage the entry of new producers into certain markets. Within market areas, it is possible that a modification of baserating or similar plans might encourage production increases where present

penalties or other charges for above-base production raise marginal costs above returns.

PRODUCTION of eggs probably can be increased by about 6 percent in the Lake States and 3 percent in the Northeast. Returns from poultry are now relatively favorable throughout much of the Region, and a large part of the increase in production is likely in areas where supplementary farm flocks are important and where the extra labor needed can be supplied by the farm family. To a considerable degree the demand in Northeastern markets is for eggs for fresh consumption, whereas in the Lake States a considerable part of the increases in production will be sold to egg-drying plants. Several plants designed to produce dry skim milk are now being used to dry eggs. Primarily because of the proximity of lower priced feed and egg-drying plants in the Lake States, it seems desirable that additional eggs for drying should be produced there rather than in the Northeast. The production of chicken meat in the Lake States in 1943 could possibly exceed 1942 output by 5 percent, or by about the same percentage as the increase in eggs. In the Northeast, the number of commercial broilers raised in 1943 is likely to be about the same as in 1942 unless special programs are introduced to increase production.

Production of meat animals—hogs, cattle, calves, sheep, and lambs—could be increased about 4 percent in the Northeast and maintained at the 1942 level or slightly higher in the Lake States. Expansion of meat production in the Northeast will be limited by increases in dairy production, while larger supplies of feed would be needed in the Lake States before output could be materially stepped up. Most of the possible increase in the Northeast would be in hog production, whereas any increase in the production of hogs in the corn area of the Lake States will just about equal reductions further North. Sheep and lamb pro-

duction could be increased about 5 percent in each of the two areas. Less rigorous culling of dairy cows, and possible lighter feeding of beef cattle in view of price ceilings may result in a production of cattle and calves in 1943 no higher than that in 1942.

ACREAGE of feed grains—corn, oats, and barley—promises to be about the same in 1943 as in 1942. With average yields production in 1943 would be approximately 15 percent below that of this year, the decline in the Lake States being about 18 percent and that in the Northeast about 5 percent. Similarly a slightly expanded hay acreage in 1943, as seems possible, may yield a total tonnage below that of this year. The trend toward a larger percentage of all hay land in alfalfa is likely to continue during the coming year.

The production of oil crops could be expanded moderately without great difficulty in 1943 and the acreage may exceed that in 1942 by 3 to 4 percent. In a considerable portion of the Northern Dairy Region the climate and soil are such that soybeans do not yield well. In the southern part of the Region soybeans may displace some acreage previously devoted to tobacco and other crops with high labor requirements. In other areas moderate shifts from small grains to soybeans could be undertaken, particularly if machinery for harvesting is obtainable. Increases in the acreage of flax may be quite closely limited by the more favorable returns from other enterprises in some areas, by a scarcity of clean land and by inexperience in growing flax.

There are definite possibilities of expanding the acreage of potatoes and truck crops by from 1 to 4 percent, although such intensively produced crops will be most seriously affected by labor and fertilizer shortages. Reduction in the quantity of fertilizer available in 1943 indicates a need for acreage expansion if production is to be maintained. However, it is quite

possible that in some of the specialized potato areas of the Northeast, the use of 30 percent less nitrogenous fertilizer would reduce yields not more than 5 percent. Quite possibly an increase in the acreage of such staple truck crops as peas and tomatoes could be achieved by reducing the acreage of certain specialty vegetable items, although such shifts should first be examined from the standpoint of canning capacity available in the area.

INCREASES of from 5 to 8 percent in the acreage of sugar beets and dry beans seem possible, as does a doubling of the land in dry peas, although these products also are ones requiring considerable labor and fertilizer. Lack of processing facilities for sugar beets is a principal factor limiting expansion in some areas of the Lake States.

Most of the possible increases in 1943 fit in fairly well with what might be considered a well-balanced agriculture after the war. Perhaps it will be found desirable in the post-war period to feed less intensively, to reduce the war-expanded acreage of some crops, such as soybeans for oil and sugar beets, and to adhere more closely to erosion-control practices. However, as the war progresses it becomes increasingly clear that certain agricultural adjustments are "musts" of the war period, even though they may contribute to agricultural unbalance after the war.

—W. F. FINNER.

COTTON: Yield

An all-time record yield of cotton is expected this year, well in excess of the 1937 record of 270 pounds of lint per acre. Total production estimated in the September crop report was 14,028,000 bales, somewhat more than expected total disappearance in the 1942-43 marketing year. Early reports indicate that a greater than average percentage of the crop is of low grade this year, largely as a result of unfavorable weather.

The Corn Belt

FARMERS in the Corn Belt as elsewhere, are planning to grow more acres of feed crops, to farrow more pigs, market more cattle, gather more eggs, and deliver as much or more milk in 1943—because they know that food will win the war. But the job is going to be difficult; immensely more difficult than it was in 1942.

Hog producers in the Corn Belt are raising this year the largest pig crop on record. Production is up in all States, although the recovery in the western Corn Belt since 1936 has lagged behind the recovery in the eastern Corn Belt.

Farmers plan to farrow 8 to 10 percent more pigs next spring than they did last spring. They also hope to market them at heavier weights. The high price of hogs and the favorable corn-hog price ratio makes hog feeding the most profitable outlet for feed grains. Moreover, a little additional labor and equipment would permit greater increases in hog production than in any other class of livestock.

MILK production in the Corn Belt is estimated to have increased 4 percent in 1942 over 1941, as compared to a goal of 6 percent. The number of dairy cows is also estimated to have increased almost 4 percent. Hence, practically all the increase in milk production is accounted for by the increase in cow numbers—not by increased production per cow. Production in Iowa probably will not increase this year. In Illinois, the increase will not exceed 3 percent. The increases in Ohio, Indiana, and Missouri will range from 5 to 7 percent.

Dairying in the Corn Belt is quite sensitive to changes in the prices of dairy and other livestock products. In large parts of the region, farmers shift readily from milking cows to raising calves and to feeding hogs instead of dairy cows. The break in dairy prices in February 1942 caused

many farmers to doubt the need for high production of dairy products. But price supports announced for butter in March and July, and for cheese, dried milk and evaporated milk in July, have provided more incentive for increased milk production.

Looking ahead to 1943, dairy farmers are not planning for any substantial increase over the high production of 1942. Better than usual growing conditions for pasture and hay during 1940 and 1941 resulted in relatively high production per cow. The weather can not be expected to remain quite so favorable for pasture and hay in 1943. Heavier grain feeding probably will be needed, therefore, to maintain production at present levels. But feed fed to hogs under present price ratios brings better returns, and many farmers who have the choice to make will feed their grain to hogs rather than to dairy cows. Moreover, the shortage of farm workers presses more heavily upon dairying than upon the production of meat animals.

BEEF-cattle numbers in the Corn Belt, where about 40 percent of the Nation's beef is produced, have been at a high level in recent years and will remain at about the same level in 1943. Increased hay and pasture acreage as a part of the soil conservation program has influenced the increase in cattle numbers in the last decade. But in the last 2 years, competition from corn and soybeans has considerably reduced the acreage of hay and pasture. The area of these crops in the Corn Belt was reduced more than 5 million acres in 1942 as compared to 1941.

Cattle feeders in the Corn Belt will attempt to obtain the maximum output of beef with the kinds of feeds that will not have a higher use value for feeding to other classes of livestock. They recognize that the place of beef cattle in a wartime livestock feeding program is that of consuming forage for which there is no alternative use, together with sufficient grain

and high-protein feeds to produce a reasonable degree of finish. Beyond this point it seems to be better to feed grain to hogs and milk cows rather than to beef cattle. Production of long-fed, highly finished cattle is a wasteful use of feed from the standpoint of obtaining the maximum output of beef. Moreover, medium and good grades of cattle yield the kind of beef bought for the armed forces and by the majority of civilians.

In order to meet next year's need for beef, cattle feeding probably will be continued at a high level. But considerable adjustment in cattle feeding operations will be made to conserve feed grains and to adjust to ceiling prices on beef. Feeding of a large number of cattle—even larger than in recent years—to a reasonable degree of finish is needed, both because of the need for adding weight to as many cattle as practicable before they are slaughtered and because it gives a better distribution of slaughter throughout the year.

The feeder who has good hay and pasture, and perhaps silage, can help meet wartime needs for meat by using these feeds, together with a light ration of corn and high-protein feeds during most of the feeding period, for fattening cattle in poor condition for immediate slaughter. For the last 30 to 60 days, the ration can be increased to a full feed of grain.

EGG production is estimated to have increased this year about 15 percent over last year in the Corn Belt. The increases will be largest in Iowa and Missouri and smallest in Ohio.

Because of the considerable expansion that has occurred in the last 2 years, farmers have indicated that about a 5-percent increase is all that would be feasible next year. Past expansion has been obtained chiefly by increasing the number of hens kept. Further expansion may have to be obtained by higher production per hen through better feeding and manage-

ment. Laying houses will be filled to capacity this winter and facilities for brooding chicks next spring will be inadequate. These conditions will increase disease and mortality, and generally lower rates of production. Family labor has supplied most of the increased labor required by expanded farm flocks, but further expansion will be limited by other demands for labor.

A SHORTAGE of feed grains for feeding the increased numbers of livestock, although less critical now than seemed likely before the September crop report, remains a definitely limiting factor in a sustained high level of livestock production. Larger than present acreages of feed grains and continuance of the record yields of recent years, or feeding of larger quantities of wheat, will be necessary for continuing 1943 or higher levels of livestock production in 1944 and the years immediately following.

The need for more feeds was reflected in larger acreages of corn, oats, and barley this year than last. The increase in the acreage of corn ranged from 3 to 14 percent, with larger increases in the western part of the Corn Belt than in the eastern part. The combined acreage of these crops will be increased again next year, with most of the increase coming in corn. A somewhat larger percentage increase in 1943 than occurred in 1942 appears feasible.

Although some land in hay and pasture has been and more will be turned over to other uses, the decrease in acreage is not likely to cause any serious shortage in forage feeds. The acreages of these crops were higher in 1939 and 1940 than formerly. The quality was better because larger proportions of the pastures and hay were alfalfa and clover, and the numbers of hay-consuming animals had not been increased proportionately. As already indicated, the numbers of hay-consuming livestock probably will not be increased much, if any, next year

so that the need for hay and pasture will not be increased. But insofar as possible, higher yielding and more nutritious hays and pastures should be grown on the reduced acreage available for these crops as a means of increasing the production of milk and of beef cattle.

SOYBEAN acreage for beans in 1942 was 167 percent of that in 1941 in the Corn Belt. An increase occurred in all States, ranging from 46 percent in Illinois to 144 percent in Missouri. Although the percentage increase was least in Illinois, the total increase in acreage was greater there than in any other State, as Illinois is the leading State in the production of soybeans.

The expansion of soybean acreage probably has reached if not overrun its limits in the eastern Corn Belt. Pressure for feed grains, hay and pasture to maintain increased livestock production will cause a leveling off or some decline in that area. In the northwestern part of the Corn Belt, however, some opportunity still exists for further expansion by substituting soybeans for oats. This substitution can occur without interfering with the seeding of usual acreages of legumes and grasses with oats as a nurse crop.

Flaxseed production in the Corn Belt is centered almost entirely in western Minnesota and in northwestern Iowa. The acreage in Iowa decreased slightly this year and it seems unlikely that any increase will occur next year. The greatest ob-

stacle to the rapidly increasing production of flaxseed in areas where it can compete with other crops is the lack of weed-free, fertile land on which to plant the crop.

MAXIMUM production in the Corn Belt, wherever it is not reached this year, will be approached very closely next year. The production of crops which require local processing, such as the canning crops and sugar beets generally will be about as large this year as can be handled by local processing plants. The proportion of cropland used for intertilled crops probably cannot be increased much beyond that already planned for next year. Livestock production next year will be about as high as available feed supplies will permit in 1944 and years immediately following.

It will become increasingly important, therefore, that every possible effort be made to obtain the most effective utilization of cropland by allocating its use to the combination of crops that will yield the highest production of feed or food and of available feed supplies by allocating them to the classes of livestock and systems of management that convert feed most efficiently into food products, insofar as such allocations are consistent with the food-for-freedom program as a whole. Every possible effort also should be made to avoid a reduction in production efficiency resulting from insufficient care, overcrowding, and diseases or parasites.

—C. W. CRICKMAN.

The West

THE WEST is one of the few regions where production of many important commodities can be increased in 1943 without doing so at the expense of other commodities only slightly less important.

Extensive, highly mechanized farming contributed much to the ability of

western farmers to increase their production in 1942 despite many obstacles. This system of farming will help western farmers expand their production still further in 1943 despite probable intensification of shortages of labor, machinery and marketing facilities.

Flaxseed is the outstanding oil crop in the West. In response to war

demands for oil, western farmers seeded in 1942 the largest acreage of flaxseed on record. With the high yields which have accompanied generally favorable growing conditions, a record production is assured. About 160,000 additional acres can be seeded for the 1943 flaxseed crop without displacing other vital commodities. Much of this increase would be in the winter flax areas where the 1942 program was announced too late to affect 1942 seedings, and in the newer flax areas of northern Oklahoma where flaxseed production has been profitable. Production from such an acreage will not equal that of 1942, however, without exceptional yields. Flaxseed is a hazardous crop in the major flax States but its labor requirements are low and the equipment used is the same as that used in the production of small grains. If the demand for oil is sufficient to warrant a substantial displacement of small feed grains, the acreage of flaxseed could be increased another 45 percent.

WHHEAT acreage would not be affected significantly by an expansion in flax. Wheat is considered to be a safer and more profitable crop. It is the strongest competitor for productive resources throughout much of the major western wheat areas. Wheat seedings for the 1942 crop were abnormally low in the eastern portion of the Great Plains because of unfavorable seeding conditions, but, for the most part, acreages were controlled largely by allotments. Despite reduced seedings, record yields produced the second largest crop in history, which, together with a record carry-over of wheat and other grains, has created an acute storage problem.

Despite the record supplies of wheat in sight, reductions in acreage should be limited primarily to those areas where such a reduction would permit increases in war commodities. In many of the drier wheat areas, particularly in the western portion of the Northern Great Plains and in the Pacific Northwest, wheat produces

more feed per acre and per man-hour than does any other crop. Since other alternatives are limited, the production of wheat for feeding livestock appears to be the greatest contribution to the war effort such areas can make. At current prices, wheat can be fed profitably.

DRY edible peas and beans, sugar beets and canning crops are specialty war crops for which the West is establishing new production records. Labor requirements for dry peas and beans are relatively low, and slightly greater acreages probably will be planted in 1943. Much of the increase in bean acreages in the West would be in Colorado and New Mexico while that of peas would be in the Palouse area of Idaho.

No goals were established for sugar beets, but encouraged by war demands, favorable adjustments of programs and good prices, western farmers expanded their beet acreage 34 percent in 1942. A late spring and a shortage of labor for timely thinning affected yields moderately in some sections but, here again, favorable growing conditions have assured high yields. Although processing facilities are adequate in most sections for a further expansion in beets, the acreage planted in 1943 will reflect the supply and cost of labor during the 1942 harvest. If the labor situation develops this fall about as was forecast in July, some beet acreage will be displaced by less intensive crops in Colorado, Idaho, and Washington. Other western States will maintain their 1942 acreage or increase it moderately, the net change in the West being an increase of about 1 percent. The labor agreement with Mexico may ease anticipated beet labor shortages unless farmers are unwilling or unable to meet the necessary requirements to obtain it. The minimum price for Mexican beet labor in northern California is 65 cents an hour.

The acreage of both tomatoes and peas for processing was increased about

one-third in the western States in 1942. In most sections the 1942 production of these crops approximates the capacity of available processing facilities. The capacity of these facilities could be increased by operating on a 24-hour basis and by spreading the harvest season. However, adequate labor both for producing and for processing a greatly expanded acreage of these intensive crops is not expected to be available. Present indications are that the acreage of tomatoes for processing will be increased only about 1 percent and that of peas for processing about 4 percent in 1943.

AS CONTRASTED with some of the other livestock-producing areas, feed supplies in the West are generally adequate. With the exception of local defense areas, any shortage of harvested feeds, particularly grains, which may limit the production of livestock and livestock products will be confined largely to normal deficit areas such as those on the West Coast. They will result primarily from transportation difficulties rather than actual feed shortages. Range forage may be limited in local sections which are overstocked but, in general, the range is exceptionally good and range livestock will go into the winter in unusually good condition.

The acreage of feed grains in the West was increased about 11 percent in 1942. It was slightly below the goals but exceptional yields more than offset any likely deficit. In the Great Plains States, for example, the production of feed grains in 1942 will be more than one-third greater than the quantity which will be fed to livestock during the next 12 months. Another 3- or 4-percent increase in 1943 will bring feed-grain acreages in the West well above 1942 goals. Any likely shortage of feed grains which might result from low yields in 1943 could be offset by feeding more wheat.

The supply of hay also is expected to be adequate generally, although less

so than that of grains. The acreage of tame hays in the West was increased only 50 thousand acres in 1942, a 300-thousand-acre increase in alfalfa being largely offset by a decrease in other tame hays. Good yields, together with a large carry-over generally, are expected to provide sufficient hay unless an unusually long feeding period is required this winter. Hay shortages may necessitate the feeding of larger quantities of concentrates and byproducts from war crops in some sections of the Intermountain States where stocks of hay were depleted by an extended feeding period last spring, and on the Pacific Coast where livestock numbers are at record levels and importations of hay may be limited because of transportation difficulties. A 5-percent increase in 1943 will bring hay acreages in the West well above 1942 goals. With a leveling off of livestock numbers, hay supplies in 1943-44 will be adequate generally if favorable growing conditions prevail in 1943.

THE livestock industry in the West is in an excellent position to produce huge quantities of meats and other livestock products. Favorable prices, together with several seasons of above-normal precipitation, stock water, and feed supplies, have led to a general optimistic outlook by western stockmen. Cattle and sheep numbers have been increased to record levels. The 17 western States, whose production represents nearly one-half of the national total for beef and veal and three-fourths of that for lamb and mutton, are expected to exceed both their cattle and sheep goals in 1942.

An increased and continuing demand for meats which will make it imperative that their production be sustained at a maximum level will necessitate some adjustments in the West. Some sections are stocked beyond the point of greatest production even with current favorable conditions. Should precipitation return to or fall below normal, the loss in production

would be increased considerably and the range would likely be damaged. A reduction in numbers in such sections would increase the current supply of meat and it would assure sustained production at a high level. Removal of stock from the range as soon as maximum weights have been attained would increase production and conserve range forage in many sections. In other sections increased feeding of concentrates and of byproducts from such war crops as dry peas and sugar beets will be necessary if livestock production is to be sustained at a maximum level.

Some adjustment, particularly in sheep operations, will be necessary also because of labor and transportation difficulties. Sheep operations are affected more than cattle by shortages of skilled and semi-skilled labor. This has been reflected somewhat already by the abnormally large movement of sheep from the range during August. It will contribute to a 1-percent decline in sheep numbers by 1943 as compared with a 1-percent increase in cattle numbers. Despite moderate

changes in numbers, production of lamb and mutton can be maintained at about the 1942 level and that of beef and veal can be increased somewhat in 1943 if favorable growing conditions prevail.

While not at record levels, hog production in the West will be increased by more than one-third in 1942. It can be increased at least another one-fourth in 1943. More than one-half of the increase in 1942 and more than two-thirds of that which appears likely in 1943 is in the two Great Plains hog States, Nebraska and Kansas. An even greater increase could be made in the other States. Hog production requires relatively little labor and equipment and it is an enterprise which can be grown into rather quickly. With the current need for pork and lard, and with the surplus of wheat which can be fed profitably to 14-cent hogs, perhaps an even greater increase in hog production should be made in those areas where range resources are limited but wheat or other grains are available.

—H. L. STEWART.

The South

VITAL crops grown in the South which could be increased substantially in 1943 include peanuts, soybeans, and long-staple cotton. Production increases in pork, eggs, and milk also seem possible. Net increases in total crop acreages will be brought about mainly by increasing double-cropping and by greater utilization of idle cropland. Livestock production increases will result principally from better care and feeding, fuller utilization of available feed and pasture, and the use of larger quantities of purchased feed.

Few agricultural changes ever made in a single year are comparable to the 1942 expansion in peanuts. Farmers probably are digging about 4 million

acres—a little more than twice the acreage harvested for edible nuts and oil in 1941. In addition, acreage of peanuts grazed by hogs (also a valuable fat source) may be more than 15 percent above last year—a record high. Increased plantings this past spring were made chiefly by “taking up the slack” in the prevailing farming systems. About one-half the added acreage was in areas where peanuts in past years had been grown only on a small scale.

MUCH of the easy substitution of peanuts for other crops in suitable areas has been made already, but increases to about 5 million acres of peanuts for nuts and oil in 1943 would appear possible if labor, machinery and price conditions favor such increases. Much of the increased acreage would

be located in newer producing areas, coming mainly from land now in feed crops or idle. In the Southeast, production would be restricted largely to the Coastal Plains with some expansion on the lighter soils of the lower Piedmont. In the Southwest, the largest expansions are likely in the Sandy Land areas of east Texas, southern Arkansas, northeastern Louisiana, and in the Low Rolling Plains section of Oklahoma.

In most of the older areas, shifts to peanuts have already reduced feed crops nearly to a minimum. A moderate increase in nuts for oil appears obtainable in most of the established peanut areas in the Southeast where peanuts have been used mainly for hog grazing in the past, but that is dependent on changes in the relative prices of hogs and peanuts for oil and the success of farmers in producing peanuts this year. Increased acreage of peanuts in 1943 will add to the already high labor peaks in the South and shortage of harvesting labor is likely to represent a real obstacle in 1943.

An "all-out" campaign in 1943 to get peanuts regardless of the effect on other crops might more than double this year's acreage, or reach a potential capacity of 10 million acres. If this reserve capacity were utilized, peanuts for oil would displace a considerable acreage of short-staple cotton.

THE 1942 acreage of soybeans for beans in the Southern States was about 3 times that in 1941. Most of this increase occurred in the Delta areas of Mississippi, Arkansas, and Louisiana, and in the Tidewater and Coastal Plains areas of North Carolina and Virginia, principally on the larger farms where some harvesting equipment was available. Smaller acreages of soybeans for hay and soil building in the Delta areas and decreases in idle land, hay, and corn in the North Carolina and Virginia areas accompanied the increase in the acreage of soybeans harvested for beans.

Soybeans fit well into farm organi-

zation in the Delta and North Carolina-Virginia areas, affording a supplemental use for small-grain machinery and competing only to a limited extent with cotton for labor during the harvesting season. Moderate increases above the 1942 acreage could be made in 1943 within the framework of the present programs and prices. Crushing facilities (cottonseed oil mills) are available in most areas. Shortages of combines for harvesting the beans are expected to be a limiting factor.

WITH average yields in 1943, cotton-seed production will likely be greater than in 1941 but considerably less than in 1942. One means of increasing the production of vegetable oils is to produce more cotton. However, in many areas the oil yields per acre are higher from peanuts or soybeans than from cotton. Moreover, the profitable production of cotton requires more nitrogenous fertilizers and labor than peanuts or soybeans. The situation is different with long-staple cotton in that more lint may be needed as well as more seed.

In recent years Mississippi and Arkansas have accounted for about two-thirds of the total production of long-staple Upland cotton (1½ inches and over). Acreage of this cotton could be increased in 1943 to 1.8 million acres, 15 percent more than in 1942. This acreage, with average yields, would produce more than 1.1 million bales. Most of the increase could be obtained by replacing part of the medium-length cotton in the delta areas and in South Carolina. Some further increase could be encouraged by additional shifts from short- to long-staple varieties. A reserve capacity roughly estimated at 750,000 acres is potentially available for long-staple Upland cotton within present allotments.

In the Southwest, production of American-Egyptian cotton in 1942 is about 80 percent above 1941. It could be increased slightly more in 1943.

SUGAR milling capacity will be the major factor limiting increases in sugar production in 1943. A 13-percent increase in sugarcane acreage with average yields would approximate milling capacity. A larger acreage could be obtained if farmers were compensated for the risks involved.

Tomato acreage in the South increased about 75 percent from 1941 to 1942. Over 134,000 acres could be grown next year, or 15 percent more than the 1942 acreage. If still more tomatoes are needed, farmers in Virginia and Arkansas alone could produce an additional 90,000 acres if they were given sufficient incentive. A major portion of this potential acreage is in Arkansas, but tires for trucks, additional canning facilities, more labor for the canneries, and better returns to growers would be essential.

For the South as a whole feed-grain acreage in 1942 increased considerably less than livestock numbers, and in the Southeast a net reduction in both feed-grain acreage and production has occurred. In the Southwest, favorable yields have provided generally ample feed supplies.

Some net shift in acreage from feed grains to soybeans and peanuts may be made in 1943. This means that to obtain increases in livestock production, farmers will need to take better care of their livestock; use more byproducts, such as cottonseed, soybean and peanut meal; purchase more feed; and salvage more waste from dug peanuts, from soybeans and from corn.

The reduced acreage of hay and forage this year has been more than offset by favorable yields and by increases in the production of peanut hay. In general, hay and forage production should be adequate to meet the needs in 1943 if yields and pasture conditions are normal.

MORE fluid milk is needed in the South to supply the increased military and civilian population in training and manufacturing centers.

A moderate increase in milk production appears possible for 1943, though considerably less than the increase in 1942. Most of the increase for next year will result from milking more cows in the commercial milk areas. Obstacles to the attainment of increased milk production in 1943 include a possible shortage of rubber for trucks and of labor, and a prospective high cost of purchased feed.

The indicated production of pork in the South this year is 28 percent above 1941. The estimated 1943 production is about 10 percent greater than in 1942. This level of pork production is about as high as practicable without a drastic change in farming methods. Areas producing pork predominantly for home consumption will produce a reduced proportion of the total for the South in 1943. Large-scale production areas such as the Central Oklahoma Prairie, the West Texas Livestock and Wheat area, and South Georgia will account for most of the increase.

THE South probably will exceed the 1942 egg goal by 5 percent. This record egg production can be maintained in 1943, and further increased in some areas. A large proportion of the eggs produced are consumed on farms; but in a few areas such as the Shenandoah Valley areas of Virginia and West Virginia, most of Oklahoma, and central Texas, chickens for commercial egg production are important in the general farming systems. These areas generally have the greatest possibilities for increase in 1943 over 1941 because of surplus grain or favorable market outlets. The primary obstacles to increased egg production are marketing and processing problems.

The response to wartime demands is clearly bringing about a desirable development of livestock enterprises in some sections of the South where there are physical characteristics which limit opportunities for cash-crop production. In the more specialized cash-crop farming areas, where large amounts of "compliance" land have

been used rather ineffectively heretofore, the development of livestock enterprises is definitely making for better balanced and more profitable farming systems. This is especially true in the Black Belt in Alabama and Mississippi, the Texas Blackland, and the Mississippi Brown Loam, areas in which land deterioration under cash cropping has become increasingly serious.

In the sub-humid cotton and wheat areas of Texas and Oklahoma the expansion of livestock production, while desirable, is thought to be a temporary means of marketing surplus feed rather than a change likely to become permanent.

IN many of the Coastal Plains areas and old peanut areas in the Southwest, wartime farm adjustments are not in harmony with long-time desirable adjustments. The soils there are inherently poor and intensive production of peanuts will hasten soil deter-

ioration unless more satisfactory production practices are developed. In the Southeast, pork production is expected to be stepped up considerably beyond the reasonable limits set by increased acreage of peanuts for grazing with hogs, or the capacity of the expanded acreage for gleanings. In some localities, grazing of peanuts supplemented by some grain feeding and better management is needed more than large increase in hog numbers.

Relatively little response to the wartime demand for farm products is being made in areas with poor physical resources and subsistence farming. In these areas agriculture has heretofore been based upon an extravagant and rather ineffective use of manpower. Although the expanded needs of other farming areas and of industry have drawn labor from these areas, there yet remains a substantial surplus in many localities.

—KENNETH L. BACHMAN.

SOYBEANS: Possibilities

In 1933 production of soybeans for beans was about 13 million bushels, in 1941 near 107 million, and September indications were for 211 million bushels this year. About 82 percent of the 1942 crop will be in Ohio, Indiana, Illinois, and Iowa. In the Corn Belt, where mostly oil varieties are grown, yields per acre are materially higher than elsewhere.

The yellow and green beans of the Corn Belt are preferred for crushing. Black and brown varieties, grown elsewhere, are considerably lower in oil content and also produce a dark-colored meal with less appeal to feeders. About 11 pounds of oil can be obtained from a bushel of high quality soybeans by the recently developed solvent process, which stepped up yields from former levels of about 9 pounds by the expeller process and 8 pounds by hydraulic presses.

Demand for soybean products has increased with technological advances and growing familiarity to users. About 75 percent of the factory consumption of soybean oil is for food products, made possible by development of processes to remove the bitter flavor of the oil. Soy flour, once used mostly in "health foods," now is used generally in bakery products. Soybean meal is constantly finding more favor with stock feeders, and industry has used more and more of it for plastics and glues.

Prospects are that soybean acreage in 1942 was about as large as is likely for the next few years. Further expansion would cut heavily into needed acreage of corn and other feed crops. Crushing facilities, difficult to expand because of wartime construction limitations, are not adequate to handle much greater crops.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 =100) ¹	Income of indus- trial workers (1935-39 =100) ²	Cost of living (1935-39 =100) ³	1910-14=100					Prices paid, in- terest, and taxes	Farm wage rates
				Whole- sale prices of all com- modities ⁴	Prices paid by farmers for commodities used in—					
					Living	Produc- tion	Living and produc- tion			
1925	90	126	125	151	163	147	156	170	176	
1926	96	131	126	146	162	146	155	168	178	
1927	95	128	124	139	160	144	163	166	178	
1928	99	127	123	141	160	148	155	168	178	
1929	110	134	122	139	159	147	164	167	180	
1930	91	110	119	126	150	141	146	160	167	
1931	75	85	109	107	128	123	126	140	130	
1932	58	59	98	95	108	109	108	122	96	
1933	69	61	92	96	108	108	108	118	85	
1934	75	76	96	109	122	123	122	128	95	
1935	87	87	98	117	124	127	125	130	103	
1936	103	100	99	118	123	125	124	128	111	
1937	113	117	103	126	128	136	131	134	126	
1938	89	91	101	115	122	125	123	127	125	
1939	108	105	99	113	120	122	121	125	123	
1940	123	119	100	115	121	124	122	126	126	
1941	156	163	105	127	131	131	131	134	154	
1941—September	161	177	108	134	136	135	136	138	165	
October	163	178	109	135	140	138	139	141	165	
November	166	180	110	135	142	139	141	143	165	
December	167	187	110	137	143	141	142	143	166	
1942—January	171	196	112	140	146	145	146	146	166	
February	172	194	113	141	147	147	147	147	167	
March	171	194	114	142	150	149	150	150	167	
April	173	203	115	144	152	149	151	151	177	
May	174	209	116	144	153	150	152	152	183	
June	176	216	116	144	154	150	152	152	202	
July	180	227	117	144	154	150	152	152	202	
August	183	227	117	145	154	150	152	152	202	
September	183	227	117	145	155	150	153	152	202	

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals ¹	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	141	153	163	156	92
1926	131	122	138	143	147	152	159	145	86
1927	128	128	144	121	140	155	144	139	84
1928	130	152	176	159	151	158	153	149	89
1929	120	144	141	149	156	157	162	146	87
1930	100	102	162	140	134	137	129	126	79
1931	63	63	98	117	92	108	100	87	62
1932	44	47	82	102	63	83	82	65	53
1933	62	64	74	105	60	82	75	70	59
1934	93	99	100	103	68	95	89	90	70
1935	103	101	91	125	117	108	117	108	63
1936	108	100	100	111	119	119	115	114	89
1937	126	95	122	123	132	124	111	121	90
1938	74	70	73	101	114	109	108	95	75
1939	72	73	77	105	110	104	94	92	74
1940	85	81	79	114	108	113	96	98	78
1941	96	113	92	144	144	131	122	122	91
1941—September	106	150	89	145	163	140	141	139	101
October	101	144	107	164	164	145	146	139	99
November	103	136	98	147	149	148	157	135	94
December	112	138	98	162	157	148	153	143	100
1942—January	119	143	102	204	164	148	147	149	102
February	121	150	95	161	173	147	155	145	99
March	122	151	111	136	180	144	130	146	97
April	120	158	118	158	190	142	131	150	99
May	120	159	131	152	189	143	134	152	100
June	116	153	145	169	191	141	137	151	99
July	115	155	131	200	193	144	145	154	101
August	115	151	126	256	200	151	156	153	107
September	119	156	129	191	195	156	166	153	107

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Bureau of Labor Statistics.

³ Adjusted for seasonal variation. Revised November 1941.

⁴ Bureau of Labor Statistics index with 1929=100, divided by its 1910-14 average of 68.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

ANNUAL OUTLOOK ISSUE

THE

AGRICULTURAL

SITUATION

NOVEMBER 1942

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TOTAL WAR DOMINATES the farm outlook for 1943. All production, farm and nonfarm, must help win victory. Prices will be determined less in the market place, more by governmental controls to obtain essential types of production and insure fair distribution of limited supplies. Military and lend-lease needs bulk large in the demand outlook and dominate the export situation. Factors usually of major importance in the outlook have been crowded aside by wartime problems of farm labor, transportation, storage, processing, building materials, machinery, and production supplies. Governmental programs for manpower, conservation, rationing, and economic stabilization will have a major influence upon these problems. They can and will be solved but not without a great deal of local initiative and local action. American soldiers and civilians will be adequately fed and clothed. Essential supplies will be carried to our allies. Farmers will work harder than ever before, and in return they likely will receive the greatest income in their history.

FARM OUTLOOK FOR 1943

IN keeping with the wartime situation, the agricultural outlook for 1943 lays greater emphasis than usual upon prospective food requirements and upon the outlook for production, processing, and transportation of agricultural commodities. Some of the reports in this issue have been condensed from speeches delivered at the annual Agricultural Outlook Conference in Washington.

DEMAND The greatest demand ever known for farm products is in prospect for 1943. War needs of this country, of the United Nations, and of civilians call for a quantity of farm products which, for some commodities, will probably be in excess of agriculture's capacity to produce in 1943.

MILITARY and lend-lease purchases in 1943 may take nearly 20 percent of the Nation's food production, compared with about 13 percent this year and 4 percent in 1941.

By late 1943, Government spending for war may be at an annual rate of 100 billion dollars, compared to an October 1942 rate of 70 billions. Spending for war in 1943 will convert most productive resources to war purposes, leaving short supplies of all goods for civilians. Only about half the quantity of industrial commodities that civilians bought in 1941 will be available in 1943, and demand for such goods will be considerably more than supply.

Government expenditures for all war goods, including the products of factories and farms, will enlarge civilian incomes to the greatest on record. Although purchasing power will be cut down by war taxes and war savings, more purchasing power than goods will remain. Wage payments will be greater, due to increased employment, longer hours, and higher average earnings, and farm income will increase again over the record 1942 receipts.

FOR FARMERS, this demand situation should mean a ready market in 1943 for nearly all the products they have for sale, unless there are difficulties in processing and transportation now unforeseen. However, in view of the strong demand generally for agricultural products, it will be desirable for farmers to replace crops that require excessive amounts of labor or transportation in relation to their value in the war effort with crops more urgently needed and requiring comparatively little labor or transportation. In view of the stringent wartime controls on prices, production, and distribution of available supplies, demand naturally will have less than its usual effect on the relative profitability of any particular type of farm enterprise.

PRICES Price trends during the remainder of the war will be determined more by governmental action than by the usual demand-supply relationships. This applies to prices received by farmers for the products they sell as well as to prices in wholesale and retail markets.

RECENT extension of price controls under the Act of October 2, 1942, providing for the stabilizing of the National economy brings under price ceilings, in wholesale and retail markets, over 90 percent of all foods included in the average family's food

budget. If wholesale and retail prices are effectively stabilized, it is reasonable to assume that further advances in the general level of prices received by farmers will not be large. Farm prices may average only 5 to 10 percent higher in 1943 than in 1942 compared with the average gain of 25 to 30 percent this year over last. Costs of transporting, processing, and marketing usually do not fluctuate as much as raw material prices so that the percentage changes in prices usually become smaller as the products get nearer to the ultimate consumer.

Prospective changes in demand-supply conditions in 1943 ordinarily would result in substantial further advances in prices all along the line—at the farm and in wholesale and retail markets. Consumers will have considerably more money to spend but, after military and lend-lease needs are met, the per capita volume of agricultural products available to civilians may be about the same as in 1942. There will be less—considerably less—industrial products for civilians in 1943 than in 1942, when both inventories and production of many consumer items were larger than they will be in 1943.

As the disparity between consumer income and available supplies of goods becomes larger (increasing income, diminishing supplies), the upward pressure on prices will increase. Rationing, increased personal taxes, and larger savings will minimize this pressure, but may not prevent some further rise in commodity prices unless the controls are further strengthened by subsidies or other measures. A few agricultural commodities (mostly fresh fruits and vegetables) and some services (especially professional services) still are not subject to price ceilings or other direct controls.

FOOD production generally has increased enough to meet war needs (military and lend-lease) and to leave more for the average civilian

consumer in 1943 than he consumed annually in the 1935-39 period. But consumer income has risen much more than food production during the year just ending. In relation to the 1943 outlook for consumer income there will be adequate supplies of cereals, citrus fruits, vegetables generally, and eggs. Poultry and fresh milk may also be available in sufficient quantities for all needs, dependent in part on the effects of shifts in demand resulting from shortages of some other foods. Meat presents the most urgent rationing problems at present, although other foods may need to be rationed later. Total meat supplies in 1943 will be of record size, but more meat probably will be needed next year than this year for military and lend-lease uses.

FARM INCOME Net income of farm operators, this year the largest on record, is expected to be even larger in 1943.

INCLUDING Government payments, net income in 1942 is forecast at nearly 9.8 billion dollars—approximately a billion dollars more than the previous record in 1919. This is 45 percent above 1941 income, and more than double the average from 1935 to 1939. Cash farm income from marketings in 1942 will be about 15 billion dollars, an increase of one-third over 1941 and nearly double the 1935-39 average. In 1919, it was 14.6 billion dollars. The increase in income in 1942 over 1941 is the result of a 25 percent rise in prices and a 12 percent increase in sales. Government payments will be about the same as in 1941, and will raise the total cash farm income in 1942 to around 15.6 billion dollars.

The net income from agriculture per person on farms this year will be about \$368 compared to \$254 in 1941. This is about 136 percent of parity income (the ratio of per capita farm income to per capita nonfarm income

in 1910-14). Net farm income was 112 percent of parity in 1941 and 100 percent of parity in 1935-39. In 1918 it reached the record height of 165 percent of parity.

Total production expenses of farm operators in 1942 are estimated at 8.7 billion dollars, an increase of more than 15 percent over 1941 and about 50 percent more than the 1935-39 average.

ASSUMING that prices next year average about the same as in September 1942, cash income from farm marketings in 1943 is forecast at approximately 16 billion dollars. Expenses have been tentatively estimated at between 9 and 9.5 billion dollars. This would leave a net income to farm operators in 1943 of between 10 and 10.5 billion dollars. The cash income forecast is based on an assumption that production of livestock and livestock products will be slightly larger in 1943 than it was in 1942; and the total volume of crops sold will be somewhat smaller.

FARM LABOR Agriculture, with the help of the weather but without the help of more workers than it had a year ago, was able to increase production substantially in 1942 by utilizing types of labor usually not in the farm labor force and by employing laborers more days per week and more hours per day. But now we are beginning to scrape the bottom of the barrel on the farm labor supply and it appears that to have sufficient farm labor next year will require more ingenuity not only on the part of farmer employers but also on the part of government.

IF present trends continue, agriculture probably will lose a million workers from its labor force between July 1, 1942 and July 1, 1943. By October 1, 1943, at the end of the harvest season, the prospective loss

will amount to 1,300,000 workers. At the same time, needed agricultural production next year would require 200,000 more workers than were available in 1942. To meet these needs to the full, next year we would have to recruit 1½ million new workers.

Perhaps public action can be taken to relieve some of the need for new workers. However, if agriculture has to recruit this many new workers, most of the likely sources are the following groups: (1) 250,000 farm boys reaching the working age of 14 years, in excess of deaths among men in the farm work force; (2) 50,000 reduction in unemployment on farms, mostly of older men and physically handicapped persons; (3) 700,000 more women to be employed, half of them to replace women already working in agriculture who will migrate into nonagricultural work and the other half as a net addition to the number of women working on farms; (4) 100,000 more nonagricultural workers who live on farms, to perform farm work in addition to carrying on their usual occupations; (5) 100,000 more children under 14 years of age; (6) 300,000 increase in town and city residents who work in agriculture.

ANOTHER important source of farm labor is the reservoir of underemployed farm operators, who because of limited land, limited operating capital, lack of knowledge, or for other reasons are producing very little for the market. The extent to which these operators are assisted to become more productive in 1943, either at home or in new jobs on other farms or in industry, will affect the farm labor situation materially. About 2 million farms, or one-third of those reported in the 1940 census reported gross incomes of less than \$400. About half of the production on these farms was consumed on the farm and on the average these farms sent only about \$100 worth of products to the

market. This third of the farms produced only about 3 percent of the marketed crops. There are also many underemployed farm operators in the middle third, those who reported gross incomes between \$400 and \$1,000, and who contributed only 13 percent of marketed crops.

Even though these groups contain a disproportionately large number of farm operators over 65 years old, and also many who spend most of their time at some nonagricultural job, it seems clear that between one-half million and one million of these operators might be assisted into more productive work either in agriculture or in industry. Should a part of these people be drawn into industry, to that extent fewer workers from the more productive farms would be needed in industry. If others were assisted in migrating to jobs on farms in more productive areas, farm labor problems there would be alleviated to a considerable extent. If at the same time those underemployed operators who remained were assisted through loans and supervision to operate the lands abandoned by their neighbors, it should be possible to keep agricultural production for the market at least as high, or even higher than before, in these poorer areas.

GOVERNMENTAL policies with respect to recruitment, deferment, transportation, housing, training, and wage rates for farm labor, setting and distributing production goals, and with respect to manpower allocation will all have an important effect on the farm labor situation in 1943. Specific details of many of these policies are now being developed. Nevertheless, one of the most important factors in the farm labor situation in 1943 will be the extent to which farmers organize for the efficient utilization of agricultural workers and of other persons in their localities who can be made available for seasonal farm work.

PRODUCTION SUPPLIES

Farmers are being asked to produce a maximum output of food in 1943 with less labor, machinery, fencing, fertilizer, insecticides and containers than were available in 1942. Elasticity in the use of labor and machinery on family-sized farms will help them get the job done.

NEXT to labor, the most important shortage in 1943 is likely to be farm machinery. For 1942, manufacturers were limited to 83 percent of their 1940 production with a wide range in limitation on specific machines. The War Production Board has signed a limitation order for the year beginning November 1, 1942, providing for manufacture of machinery at a level equal to 20 percent of the average of 1940-41. Furthermore, in the past year there were large inventory stocks in dealers' hands and now there are none.

Temporary rationing of 18 machines is now being carried out by county rationing committees. It is contemplated that about four times that many items will be rationed for next year. The purpose is to prevent hoarding, and to try to get machines in the hands of farmers who can make the greatest use of them in food production. Fortunately, it is contemplated that machinery repairs will be available as needed, although the manufacture of repair parts may be subject to some delay.

FENCING materials are even more scarce than new farm machinery. There are practically no stocks on hand. The War Production Board has approved a request for manufacture of 50 percent of the average roddage made annually in the last 5 years. This authorization is expected to run for the last quarter of 1942 and the first quarter of 1943. Lighter gage and simplified design will cut the weight of the fencing made by about one-third. Fencing will be rationed along with machinery.

THE supply of phosphates and potash seems to be adequate for 1943. Triple superphosphate will be somewhat limited by lend-lease shipments, but if carefully handled it probably will meet the most essential needs. The War Production Board has limited the nitrogen content of grades of fertilizer which can be manufactured and has specified that no chemical nitrogen can be sold for nonessential uses such as lawns and golf courses, nor for fall-sown grains for harvest. Still further restriction may be desirable. At present it is contemplated that some 350,000 tons of oilseed meals will be diverted to fertilizer use. This would relieve the shortage considerably, but rationing in some form will be necessary.

Several months ago the War Production Board issued a limitation order designed to restrict use of critical building materials to types of construction that are essential to the war effort. Under the terms of this order a farmer may, without specific approval, make improvements to his dwelling costing not more than \$200, or he may expend during a 12-month period not more than \$1,000 on any other farm buildings. For any new agricultural construction beyond the specified exemptions, a farmer may file an application with his County USDA War Board.

SUPPLIES of several insecticides and fungicides will be tight, but with careful handling essential needs probably can be met. Only enough pyrethrum and rotenone will be available for the most essential agricultural uses. It will be imperative that sprays using copper, such as bordeaux mixture, be rigidly economized. The Secretary of Agriculture has approved a program to divert 25,000,000 pounds of tobacco for manufacture of nearly 2,000,000 pounds additional nicotine sulfate as a substitute for some other spray materials.

Even though they obtain less labor, supplies, and equipment in 1943, far-

mers can do a great deal to maintain maximum production by giving more feed and better balanced rations to the same number of livestock, by sharing machinery, by vigorous repair campaigns, by use of improved farming practices, and conversion to the most essential war crops.

MARKETING AND TRANSPORTATION

Many drastic adjustments

in the marketing and transportation of farm products appear to be inevitable in 1943. Rail traffic in 1942 is estimated to exceed traffic in 1941 by 30 percent for freight and 50 percent for passengers. There may be a further increase of as much as 15 percent in total rail traffic in 1943. Agricultural traffic is expected to be somewhat larger than it was this year. The prospects for moving all of this larger traffic in 1943 are not bright. While the car supply situation is tight, the locomotive outlook is even more unsatisfactory. Inability of railroads to obtain maintenance and repair material increases the gloom of the picture. The situation will become worse as peak traffic conditions are encountered in the fall of 1943. If shortages should materialize in the period ahead in spite of all efforts to utilize cars and locomotives fully, shippers and travelers should be prepared for a system of priorities which might bar certain traffic from the railroad altogether. Motortrucks probably will not be able to haul as much traffic next year as they did this year. A considerable proportion of farm trucks may be out of operation altogether by the end of 1943.

TRANSPORTATION facilities for moving livestock to be marketed in the fall and winter of 1942-43 apparently will be adequate. But in view of an expected increase in livestock marketings, the problem of providing adequate transportation for livestock may be acute in the winter

of 1943-44. The aggregate transportation load for livestock is customarily heaviest in October when cattle and sheep are moved from western ranges in relatively large numbers.

Livestock trucks can be conserved through any of the following methods: (1) Enforcing a more efficient pick-up service in the country so as to require less travel to complete loads; (2) minimizing cross-hauling; (3) using small trucks for assembling livestock from farms for delivery to appropriate points, where transfer is made to larger trucks or railroads for transportation to markets; (4) limiting pick-up service in a community to one or a few days per week; (5) establishing truck associations in communities where they can transport livestock more economically than private truckers; (6) avoiding the unnecessary intermarket movements of livestock, and (7) insuring capacity loads for livestock trucks and return loads from market.

Available data indicate there will be no over-all shortage of processing facilities for livestock in the winter of 1942-43. Killing facilities are fully

adequate, but chilling and storage facilities are only barely sufficient in some areas. There will be an even heavier movement of livestock in 1943-44 if production goals are met next year. Some means of insuring an orderly market movement may be necessary.

A shortage of materials for making cans threatens to reduce greatly the volume of fruits and vegetables to be canned in 1943. In addition, military and lend-lease requirements will absorb a large part of the available supply of some canned products, as well as of dried fruits. To make up for the shortage of canned fruits and vegetables, some increase in other forms of processing may be obtained, principally packing in glass and freezing; and a larger proportion of these products may be marketed fresh. Any such program should be planned with the possibility in mind that there may be a shortage of refrigerator cars in 1943-44. Foods which have a high nutritional value in relation to their bulk may be given preference in trans-

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average, August 1909-July 1914	October average, 1909-13	October 1941	Septem- ber 1942	October 1942	Parity price, October 1942
Wheat (bushel)	cents 88.4	88.1	91.0	102.6	103.5	136.1
Corn (bushel)	do 64.2	64.8	64.9	82.6	77.5	98.9
Oats (bushel)	do 39.9	38.4	38.9	43.3	43.2	61.4
Rice (bushel)	do 81.3		96.7	154.4	159.6	125.2
Cotton (pound)	do 12.4	12.1	16.6	18.59	18.87	19.10
Potatoes (bushel)	do 69.7	65.0	16.55	107.7	102.5	¹ 110.4
Hay (ton)	dollars 11.87	11.49	8.34	9.03	9.39	18.28
Peanuts (pound)	cents 4.8	4.6	4.41	5.69	5.77	7.39
Apples (bushel)	dollars .96	.72	.87	1.20	1.14	1.48
Hogs (hundredweight)	do 7.27	17.34	10.13	13.57	14.11	11.20
Beef cattle (hundredweight)	do 5.42	15.30	9.14	11.17	11.36	8.35
Veal calves (hundredweight)	do 6.75	16.81	11.06	13.00	13.02	10.40
Lambs (hundredweight)	do 5.88	15.37	9.83	11.92	11.84	9.06
Butterfat (pound)	cents 26.3	26.8	136.5	42.9	46.5	³ 41.8
Chickens (pound)	do 11.4	11.5	16.0	20.3	19.5	17.6
Eggs (dozen)	do 21.5	23.8	31.8	34.7	37.4	³ 42.0
Wool (pound)	do 18.3	18.5	136.2	39.7	39.7	28.2
Tobacco:						
Flue-cured, types 11-14 (pound)	do ⁴ 22.9		32.8	37.0	42.4	28.4

¹ Revised.

² Post-war base.

³ Adjusted for seasonality.

⁴ Base price crop years 1934-38.

portation over foods of low nutritional value when the transportation shortage becomes severe.

OILSEED crushing plants are located principally on the east and west coasts, in the cotton South, and near some large centers of consumption. This is primarily the result of the fact that until recent years cottonseed and some flaxseed were the only domestic oilseeds produced in sufficient quantities to be of any great commercial importance. Construction of new processing and storage facilities will be difficult if not impossible in view of the shortage of strategic materials. Therefore, it will be necessary to move a large quantity of soybeans and other oilseeds to distant mills.

A study of the keeping qualities of the different oilseeds at various stages in their processing has led to the suggestion that it may be desirable that cottonseed should be crushed first, and that soybeans, in excess of the quantity that can be processed locally, should be stored as beans in the North Central region to the extent that storage capacity is available on farms or in elevators. Peanuts, already located in the South, can be crushed as desired.

The general outlook for marketing and transportation in 1943 and as long as the war lasts points to the need for vigorous action by producers, middlemen, consumers and Government agencies to anticipate bottlenecks and find a solution before they become severe.

DESPITE increases in wages and some other costs of doing business, marketing margins for foods have not changed much since the outbreak of the war, and have remained well below normal in relation to the level of prices and costs. Over-all margins on cotton products have increased, and are near normal in relation to the level of prices and costs. The big increase in consumer expenditures for many important foods has been passed back

in full to the farmer in the form of higher prices, whereas most of the increase in consumer expenditures for cotton products has been taken up by the marketing system in the form of higher charges. Only in the last few months has an appreciable increase in marketing margins for foods been apparent, but there are indications that this trend may continue into 1943. Cotton margins are not expected to change much from current levels.

LIVESTOCK Livestock production has expanded rapidly in the United States during the past few years. Several all-time high records for the production and marketing of meat animals were established in 1942, and even greater marketings are in prospect for 1943. It is now estimated that the combined output of beef, veal, pork, lamb, and mutton in 1942 will total close to 23 billion pounds, and that total production of these meats in 1943 may exceed 24 billion pounds. These figures compare with the 1935-39 average production of only a little over 16 billion pounds.

DESPITE the high level of meat production, total supplies are not large, relative to our total wartime requirements. Military and lend-lease needs are absorbing most of the increase in production that has occurred during the past 2 or 3 years, while civilian demand for meats also has expanded greatly as a result of the increases in employment and advances in wage rates that have taken place. For the year beginning October 1, 1942, military and lend-lease requirements for meats are estimated at approximately 6½ billion pounds. This leaves roughly 17½ billion pounds available for civilian consumers. On a per capita basis this supply will almost equal the high 1941 rate of consumption of a little more than 140 pounds per person, but it will fall 10

to 15 pounds short of the amount of meat which civilians would like to buy at ceiling prices.

To make certain that sufficient meat will be available for military and lend-lease uses during coming months, the Office of Price Administration recently has placed restrictions upon the distribution of meats to civilian consumers. For the last 3 months of 1942, commercial meat packers are required to limit deliveries of meats into civilian consumption to the following percentages of such deliveries in the last quarter of 1941: Beef, 80 percent; veal, 100 percent; pork, 75 percent; lamb and mutton, 95 percent. At the same time, consumers are being urged to voluntarily restrict their consumption of meats to a weekly average of 2½ pounds (retail weight basis) per adult. This amount of meat, if equitably divided among consumers, will be adequate for good nutrition. Formal rationing of meats probably will be instituted by the Office of Price Administration early in 1943.

HOG producers this year are raising the largest pig crop on record—105.5 million head. This is 20 million head more than were raised in 1941 and 27 million more than the average annual pig crop of the 10 years prior to the 1934 drought.

Secretary Wickard has asked farmers to plan for a 10 percent increase in their 1943 spring farrowings, and to market their hogs 10 pounds heavier than they did in 1942. If these production increases are attained, the total output of pork in 1943 may exceed 13 billion pounds, dressed weight, compared to about 11 billion pounds in 1942.

In spite of somewhat larger than average death losses from the 1942 pig crop, total hog slaughter in the 1942-43 marketing year (October-September) may reach nearly 95 million head, and the number slaughtered under Federal inspection may total 65 or 66 million. Inspected hog slaughter in the marketing year

just completed (through September 1942) totaled 52.4 million head.

The usual fall increase in hog marketings is now under way. Because this year's spring pig crop was 25 percent larger than that of 1941, the number of hogs to be marketed during the 1942-43 fall and winter season (October-April) is expected to be 9 or 10 million head greater than it was a year earlier. If marketings follow about the usual seasonal pattern, the number of hogs marketed for slaughter at Federally inspected plants during December and January may exceed a monthly rate of 7.5 million head in one or both of these 2 months. The largest number of hogs slaughtered in any other month of record was 6.6 million head in December 1924. Although packing plants in the past always have been able to handle any number of hogs that have come to market, wartime conditions may have prevented processors from fully making the adjustments needed to handle the prospective large run of hogs this winter. For this reason the Department of Agriculture urged farmers to fatten out their early spring pigs as rapidly as possible for market before Thanksgiving. It also recommended that farmers carry late spring pigs beyond the December-January peak period. In addition, plans for marketing control measures are being worked out—to be applied if congested market conditions should develop.

The upward trend in hog prices which began in late 1940 has been halted by the establishment of ceiling prices for hog products. Maximum wholesale prices for pork became effective in March, but because of the strong competition between packers for the limited supply of hogs, prices for live hogs advanced further after that date. This resulted in materially reduced packers' margins and the threat that many small packers might be forced to go out of business. All packers are needed to handle the large number of hogs that will be marketed

during the coming year, and the Department of Agriculture has made plans to assist processors who have been caught in the so-called "small packer squeeze." The peak price for hogs reached at Chicago during the past summer was \$15.75, the highest price in 22 years. The 1942 average price received by farmers for hogs will be about \$12.75, compared with \$5.40 in 1940. The Office of Price Administration has indicated that ceiling prices for live hogs may be established in the near future. Because of the strong demand for hog products, prices for hogs in 1943 probably will remain at or near the highest prices permitted by the ceilings.

CATTLE numbers had reached an all-time high at the outbreak of the current war. Cattle numbers tend to fluctuate in cycles of around 15 years in length. The most recent low point in the cattle cycle occurred in 1938, following several years of heavy liquidation caused by the 1934 and 1936 droughts. Since then breeding herds have been built up rapidly by the withholding of cattle and calves from slaughter. On January 1, 1942, our total cattle and calf population amounted to 74.6 million head, slightly more than the previous peak number reached in 1934 and a new high record. But cattle numbers have been built up further during the year that is nearly ended, and numbers on January 1, 1943, probably will be at least 1 million head greater than a year earlier.

Whether or not cattle numbers will increase further during 1943 will depend upon several factors, among which will be weather and feed conditions next year. Some increase in cows kept for milk is expected, and if range conditions are favorable in the Western States, continued holding back of breeding stock may take place in some areas where numbers are still below the 1934 peak. In the Corn Belt, where cattle numbers are at much the highest level on record and where hog production has increased sharply, little

further increase in cattle numbers is expected. Cattle numbers have now increased to the point at which slaughter can be stepped up sharply without causing a reduction in breeding herds. During the current year, cattle and calf slaughter will total close to 28 million head. This is about 2 million head more than in 1941. Cattle and calf slaughter in 1943 could total about 30 million head without cutting into breeding herds. And in addition, a moderate liquidation of cattle numbers could take place without jeopardizing a continued high level of beef and veal production.

Ceiling prices were established by the Office of Price Administration for beef and veal in April. Cattle prices have fluctuated considerably since then, with prices of the lower grades of slaughter cattle tending to advance relative to the upper grades. Strong competition between packers and cattle feeders also has supported feeder cattle prices at relatively high levels. The relationships between prices of feeder cattle, fat cattle, and feeds during the early fall have been moderately favorable for cattle feeding, however, and the number of cattle fed during the 1942-43 feeding season again may be large. Shipments of feeder cattle to the Corn Belt during the 3 months July-September totaled 9 percent larger than a year earlier, despite some reports that price regulations have been unfavorable for cattle feeding.

SHEEP production has increased rapidly in the United States during the past several years. The total number of sheep and lambs on farms and ranches at the beginning of 1942 totaled 56.0 million head. This year's lamb crop was slightly smaller than the record large 1941 crop, however, chiefly as a result of unfavorable weather at lambing time. Marketings of sheep and lambs for slaughter so far in 1942 have totaled about 10 percent greater than a year earlier. A large part of this increase has been in ewe lambs and sheep, and it appears

that some liquidation of breeding stock is under way, reflecting a shortage of sheep herders in Western States. The total number of sheep and lambs on farms and ranches at the beginning of 1943 may be smaller than the record large number on hand a year earlier. Lamb and mutton constitute roughly 5 percent of our total meat supply.

POULTRY PRODUCTS

Production of poultry and eggs in the United States in 1943 is likely to surpass the record output of 1942. Prices for the year as a whole will average higher than in 1942 and cash farm income from poultry and eggs will establish a new high record. Some further increase in feed-grain prices is in prospect for the coming year but the extent of increase will be limited by large supplies of feed including feed wheat.

TOTAL egg production in 1943 probably will be from 6 to 8 percent larger than this year's output because of increases in numbers of layers. The rate of production per hen is likely to continue at about the 1942 level. Egg production in September was 11 percent larger than a year earlier and total output in 1942 will be 14 or 15 percent larger than in 1941. Wholesale egg prices at Chicago in early November were from 10 to 25 percent higher than a year earlier.

A further increase in chicken meat production is likely next year. Supplies per capita will be by far the largest on record. With a favorable egg-feed price ratio in prospect, the number of chickens raised to obtain pullets may be even greater in 1943 than in 1942. Also, a considerable number of out-of-season chicks probably will be raised on general farms to produce additional meat supplies. On September 16 the Secretary of Agriculture recommended the hatching and raising of chicks this fall to augment meat supplies in coming months. Commercial broiler production prob-

ably will continue at a more nearly constant level during 1943 than ever before, since prices are likely to be favorable throughout the year. Feed wheat and soybean meal will be available in large quantities to support increased chicken production. Total marketing of chickens from general farms in 1942 will be 16 to 18 percent in excess of the 1941 volume, with much of the increased quantity coming in the last quarter of the year.

Supplies of turkey this fall will be about as large as last fall and prices will continue to be materially higher than they were a year ago. Turkey production in 1943 may be larger than this year. Supplies of feed are large and the turkey-feed price ratio has been favorable for producers.

DAIRYING Dairy production in 1943 will be at about the same volume as in 1942; military and lend-lease requirements will be much larger. Therefore there will be less dairy products per capita available for civilian consumption—perhaps the least in two decades.

ALTHOUGH the relation between prices of dairy products and prices of feed was considerably less favorable to dairymen in 1942 than in 1941, milk production was increased 4 percent. Cow numbers increased 3 percent and production per cow about 1 percent. However, military, lend-lease, and consumer demand has expanded more rapidly than production, and stocks of dairy products at the end of the current year probably will be about 35 percent smaller than they were at the beginning. For 1942 as a whole, butter production may average about 1 percent smaller than in 1941, but production of cheese may be increased by 20 percent, condensed and evaporated milk 10 percent, and dried skim milk for human consumption over 50 percent.

Military and lend-lease requirements for milk and dairy products will be materially larger in 1943 than they were in 1942. Under present ceiling prices, consumers if unrestricted would use a part of their prospective increase in income to buy slightly more milk and milk products per capita than in 1942. Under present conditions, a desirable carry-over for essential working stocks at the end of 1943 would be 5 billion pounds, milk equivalent, compared with 3½ billion pounds at the end of 1942 and a 1936-40 average carry-over of 3 billion pounds. This assumes a maintenance of Government stocks at a level equivalent to several months' lend-lease requirements and of civilian stocks at 1935-39 average levels.

PROSPECTIVE total milk production on farms in 1943, without special incentives to producers, is estimated at 120 billion pounds, the same as in 1942. This assumes about 2 percent more cows on farms than in 1941 but about 2 percent less production per cow. Although farmers probably will increase their rate of culling because of the shortage of labor, high beef prices, and ample replacement stock, the record large number of 1- to 2-year-old heifers on farms this year may result in an increase of 1 to 3 percent in the number of milk cows on farms in 1943.

Higher feed prices, continued strong competition from hogs and beef cattle, and the probability of average pasture conditions in 1943 compared with unusually favorable pastures in 1942, are the principal factors pointing to decreased milk production per cow. Dairy prices in 1942 were related about normally to feed prices, but were materially below normal in relation to hog prices. The disparity with respect to hog prices is expected to continue in 1943. Moreover, feed prices probably will increase relative to dairy prices. On the other hand, record or near record supplies of feed

grains and hay per animal unit and roughly 5 percent higher dairy-product prices than in 1942 will help to retard the expected decrease in milk production per cow.

STOCKS of dairy products at the beginning of 1943 are expected to total about 3½ billion pounds milk equivalent. With a prospective production of about 120 billion pounds, the supply of milk for human consumption in 1943 will total approximately 123½ billion pounds, compared with 125½ billion pounds in 1942. This is materially less than the estimated requirements. The deficit may be met by restricting civilian consumption of dairy products or in part by increasing the consumption of skim-milk products. To attain a production of more than 120 billion pounds of milk, subsidies probably would be needed to offset the relatively high prices of feed, hogs, and beef cattle, and to meet increasing farm wage rates.

If no special incentives are offered producers, civilian consumption of milk and milk products in 1943 may be reduced to about 775 pounds per capita, milk equivalent, the lowest in two decades. Per capita consumption was 838 pounds in 1942, and an average of 811 pounds annually in 1936-40. Even if the greatest possible production of milk were attained, civilian supplies would be several billion pounds less than consumers would purchase at the prospective level of prices and income. Hence, even with maximum production, restrictions probably will need to be placed on domestic consumption of milk or milk products.

Over 30 billion pounds of skim milk are fed to livestock on farms annually. Although only a part of this would be available for human consumption, the use of various skim-milk products probably will be increased as the impacts of the milk situation are felt by consumers. The principal skim-milk

products of which consumption might be increased in 1943 are roller-process dried skim milk for use in cooking, cottage cheese, cultured buttermilk, flavored milk drinks with a low butterfat content such as chocolate drink, and fluid skim milk. Skim milk contains all of the nutritional elements of whole milk except butterfat and vitamin A.

Cash farm income from dairy products increased 25 percent between 1940 and 1941, and may have increased by an additional 20 to 25 percent in 1942. In both of these years, production and prices were increasing. However, in 1943 production may show no increase unless special incentives are offered producers. Under price ceilings, cash farm income from dairying in 1943 may be only about 5 percent higher than it was in 1942.

FEED Record supplies of feed grains, high-protein feeds, and forage crops are available for the 1942-43 feeding season. The larger numbers of livestock on farms in 1942-43 are expected to require about 10 percent more feed than in 1941-42. But even after allowing for the greater requirements of livestock, the entire feed situation is as good as, if not better than, a year ago.

THE October 1 supply of feed grains (including the corn supply and stocks of oats October 1, and production of barley and grain sorghums) is 11 percent larger than last year and slightly larger per grain-consuming animal unit on farms. The corn supply is estimated to be 3,624 million bushels, more than 300 million bushels greater than in 1941. Corn, oats, and barley supplies are all the largest on record. In addition to a larger supply of feed grains, more wheat will be available for livestock feed.

Larger total supplies of high-protein feeds in 1942-43 will allow the feeding of more nearly balanced rations than in any previous year, especially in the

Corn Belt, but producers of hogs and poultry will need to feed more oilseed meal to replace limited supplies of animal protein feeds. About 35 percent more oil cake and meal is in prospect for 1942-43 than was available in 1941-42. The total quantity of protein byproduct feed from the packing industry, plus fish meal and skim milk, on the other hand, is expected to be no larger than last year, and the smallest in recent years in relation to the number of livestock consuming these feeds.

The supply of hay for 1942-43 is 9 percent larger than the 1941-42 supply and about 6 percent larger per hay-consuming animal unit. Hay supplies are ample for the increasing number of livestock in nearly all areas. The harvested acreage of hay is 72.7 million acres, the largest since 1924. Hay acreage in 1943 may be reduced slightly from 1942, since in some areas there will be a shift from hay crops to feed grains to provide concentrates for the increasing number of hogs and poultry.

DURING 1941-42 livestock consumed 10 percent more concentrates than in 1940-41. Livestock production will continue to expand during the coming year and the quantity of feed consumed in 1942-43 probably will be increased by another 10 percent. However, the 1942 production of feed grains that was indicated October 1 appears to be about sufficient to meet this heavy utilization, without reducing the quantity of feed grains carried over at the close of the 1942-43 season.

With continued strong demand for feed in prospect, the total acreage planted to feed grains in 1943 is expected to be larger than in 1942. Production of feed grains next year, however, probably will be smaller than this year when yields were exceptionally high. With yields per acre about the same as the 1937-41 average and with a moderate increase in acreage, the total production of

four feed grains would be somewhat smaller than in 1942. Livestock production in 1943-44, on the other hand, probably will be greater than in 1942-43. Thus, a reduction in reserve stocks of feed grains is in prospect during the 1943-44 marketing season. A considerable increase in the quantity of wheat fed to livestock in 1943-44 also may be necessary.

Feed grain prices have risen 20 percent during the past year and about 75 percent since the beginning of the war, reflecting the strong demand for feed. Livestock prices have advanced more than feed prices since the war started, making feeding ratios more favorable to livestock producers. The strong demand for feed may cause feed prices to advance further in 1943, unless subsidies or other means are used to hold them at present levels. Advances in feed grain prices in the early part of 1943, in any event, will be limited by the large supplies of all feeds available, by the feed-wheat program, and by price ceilings on feeds and livestock products. Prices of oil meals will be low during 1942-43 relative to prices of tankage, meat scraps, and fish meal.

FOOD GRAINS

Supplies of food grains in 1943-44 are expected to be fully ample to meet all requirements. Following the record and near-record crops in 1942, large carry-over stocks are expected at the beginning of the 1943 marketing year. The 1942 wheat crop was the second largest on record (in spite of a substantial reduction in acreage), the rye crop was the largest since 1922, and the rice crop set an all-time record.

IF total wheat seedings for the 1943 crop are approximately equal to the national allotment of 55 million acres and average yields are obtained, production will total about 650 million bushels. Some increase in the quantity used for food and a substantial increase in nonfood uses may result in

a total domestic disappearance of about 800 million bushels of wheat in 1943-44. This is equal to the estimated carry-over July 1, 1943. Therefore, the quantity available for export in 1943-44 and carry-over July 1, 1944, would be approximately equal to the size of the new crop.

It is expected that the acreage actually seeded for the 1943 wheat crop will be somewhat below the national allotment. However, this may be more than offset by better than average yields, resulting in a crop larger than 650 million bushels. There is abundant moisture in the soil this fall in the winter wheat States. Unless yields are considerably above average, the large domestic disappearance expected would cause supplies to be reduced and the domestic storage situation to be improved in 1943-44.

EVEN though the carry-over stocks of rye at the beginning of the 1943-44 marketing year will be large, little reduction from the 3,870,000 acres harvested in 1942 is expected. A review of the acreages in the States in which some reduction may take place indicates the possibility of a reduction to about 3,700,000 acres. Assuming a yield of 11.2 bushels (the 1930-39 average), a production of 41 million bushels would be indicated. This would be less than likely disappearance. As in the case of wheat, however, yields may be higher than average because of the abundance of moisture in the soil. If it is assumed that the crop will largely take care of the disappearance in 1943-44, which will probably be considerably larger than average as a result of increased feed use, the carry-over at the end of 1943-44 may still be large because of the large stocks at the beginning of the year.

THE acreage seeded to rice in 1942 totaled 1,480,000 acres. This was an all-time record. With labor and equipment shortages, a somewhat smaller acreage may be seeded in 1943.

If 1,400,000 acres are seeded, and the yield is 48.4 bushels (the 1938-42 average), a crop of about 68 million bushels will be obtained. On the basis of present prospects, the carry-over at the beginning of the 1943 marketing year may total about 6 million bushels. Total supplies, accordingly, may be about 74 million bushels. While a supply of this size would be slightly larger than the record of 72 million bushels in 1942-43, it is expected that the disappearance will be so large that only about an average carry-over may remain at the end of the 1943-44 marketing year.

On the basis of present prospects, wheat and rice prices in 1942-43 are expected to average higher than in 1941-42. If the wheat supply situation is improved in 1943-44, prices may average higher than in 1942-43. Rye and rice prices possibly may average not much different from those in the current 1942-43 year.

FATS AND OILS Production of fats and oils from domestic materials is expected to total nearly 12 billion pounds in 1943 compared with about 10.6 billion pounds in 1942, 9.4 billion pounds in 1941, and an average of 7.8 billion in the 5 years, 1936-40. Animal fats and vegetable oils probably will share about equally in the increase from 1942 to 1943. Vegetable oils will constitute over 4 billion pounds of the total in 1943. A record production of vegetable oils from domestic oilseeds seems assured by the large supplies of oilseeds that will be available for crushing from the unprecedented 1942 crop. Production of lard, tallow, and greases is expected to show further gains mainly as a result of increased hog and cattle slaughter.

PRODUCTION of vegetable oils in the 1943-44 crop year, may be somewhat less than in 1942-43. Oilseed yields per acre were unusually high in 1942, and the very favorable weather conditions of this year prob-

ably will not be repeated in 1943. Animal-fat production in 1943-44, however, may show some further increase, particularly if the pig crop is larger in 1943 than it was in 1942. It may be possible, therefore, to maintain a 12-billion pound rate of fat production well into 1944 unless the weather is unusually bad during the 1943 growing season.

Requirements for fats and oils from domestic materials will be larger in 1943 than ever before, reflecting the loss of imports of coconut, palm, and tung oils from the Far East and the large exports of lard and domestic vegetable oils to be made under lend-lease. The United States recently has shifted from a net importing to a net exporting basis for fats and oils.

To provide a strategic reserve supply of primary fats and oils against contingencies such as an unexpected increase in lend-lease requirements or poor crops in 1943 or later, the War Production Board issued an order in September restricting the use of primary fats and oils by major manufacturers to specified percentages of the 1940-41 average use. The manufacture of butter and lard is not affected by the order. The use of fats and oils in the manufacture of edible products for military use and all products for lend-lease also is unrestricted. Factory and warehouse stocks of fats and oils, which have declined in the past 2 years to less than 2 billion pounds, are expected to be built up to about 3 billion pounds in the next 10 or 12 months. An additional 300 or 400 million pounds of oil probably will be held in reserve in the form of uncrushed soybeans.

The per capita supply of food fats and oils for civilian use in 1943 probably will be about as large as the average for recent years. But with industrial employment and income increasing, and with retail price ceilings in effect, the quantity demanded may be moderately larger than the available supply. A con-

siderable reserve exists, however, in wasted meat fat, much of which could be recovered in the kitchen for use in cooking.

THE index of wholesale prices of 8 leading domestic fats and oils rose about 15 percent from September 1941 to September 1942, reaching 101 percent of the 1924-29 average in the latter month. Advances of about 20 percent in butter, lard, and linseed oil accounted for most of this rise. With the extension of price controls to butter early in October 1942, wholesale and retail prices of all fats and oils except linseed oil were covered by ceiling orders, and advances in prices of fats and oils after October 1942 and in 1943 probably will be relatively small. Linseed oil prices probably will not advance materially, as comparatively large supplies of flaxseed are available and requirements for paint oils probably will decrease in 1943 with a declining rate of building activity. Strong consumer demand is likely to keep prices of other fats and oils at or near ceiling levels.

Demand for fats and oils from domestic materials is likely to continue strong into the 1943-44 crop year. Demand for oil meal is also likely to continue at a high level as a result of a large number of animals on farms and a large output of livestock products. These factors will tend to keep prices of oilseeds of the 1943 crop at a high level, but price controls may prevent any major increases over prices for the 1942 crops.

UNDER arrangements made with the Commodity Credit Corporation, crushing mills have agreed to pay not less than certain specified prices for cottonseed, soybeans, and flaxseed produced in 1942. These support prices will result in a United States season average price to growers of about \$47.50 per ton for cottonseed. Prices to growers for soybeans will range from \$1.40 per bushel for brown

and black beans of low oil content to \$1.60 per bushel for green and yellow beans of high oil content, with discounts for beans grading under No. 2. As the great majority of the beans produced will be of the high oil-content type, the season average price for the United States probably will be between \$1.55 and \$1.60 per bushel. Support prices for flaxseed are on the basis of \$2.40 per bushel at Minneapolis. In addition to the arrangements with crushers, loans are being made to farmers on flaxseed. These measures probably will result in a season average price of about \$2.25 per bushel to farmers for flaxseed. The Agricultural Marketing Administration has guaranteed minimum prices for peanuts for oil averaging about \$80 per ton to growers, but prices actually received probably will average somewhat higher, reflecting Government support prices for peanut oil and peanut meal.

LARGE acreage goals were set for oilseed crops in 1942. Farmers were asked to plant 4.5 million acres of flaxseed, to harvest 9 million acres of soybeans for beans, and to pick or thresh 5 million acres of peanuts. These acreages were 34, 54, and 150 percent, respectively, greater than the corresponding 1941 acreages. The goals for flaxseed and soybeans have been surpassed. Farmers planted nearly 200,000 more acres of flaxseed than requested, and it is indicated they will harvest nearly 2 million more acres of soybeans for beans than asked for. Although the indicated acreage of peanuts picked and threshed falls about 800,000 short of the goal, it is more than double the 1941 acreage and represents the greatest percentage increase over 1941 for any oilseed crop.

Twenty-four million acres of cotton were planted in 1942, 4 percent more than a year earlier. Production of cottonseed is indicated to be 25 percent greater, however, as a result of a record yield per acre.

FIBERS War in 1942 cut off silk imports and made it difficult to import wool, hemp, jute, and flax. War needs increased the demand for synthetic fibers, principally rayon and nylon, at the same time that shortages of strategic materials and labor made it difficult to increase the manufacture of textiles of all sorts.

An abundant supply of domestic cotton remains—particularly in view of the large crop this year. The net effect is that farmers are assured a good demand for high grade and long-staple cotton in 1943; moreover, farmers probably will continue to have difficulty in obtaining adequate supplies of sacks, twine, and similar supplies in 1943.

COTTON farmers are now selling their 1942 crop for the largest returns since the 1920's. The October farm price of lint was 18.87 cents, the highest for October since 1927 but less than the April and May prices of 19.03 and 19.17 cents, respectively. At this price the value of lint would be about 1,304 million dollars this season, the highest since 1927 and 43 percent above 1941-42.

The domestic supply of American cotton this season is estimated at about 24.0 million bales compared with 22.6 million last season and a 1936-40 average of 22.2 million bales. The increase over last season is attributable to the sharp increase in production (about 13.6 million bales compared with 10.6 million last season) more than offsetting the decline in carry-over of 1.6 million bales. The carry-over contained more high-quality cotton than was generally expected but the new crop is averaging shorter in staple than last season.

The increase in consumption which began in 1940 continued until a peak of 999,749 bales was reached in April 1942, a level equivalent to an annual rate of 11.9 million bales. Consumption has since ranged from 5,000 to

75,000 bales below the April record. Many mills are operating virtually at capacity and it is becoming more and more difficult to recruit additional labor. However, total domestic consumption may be about 11.6 million bales compared with last season's record of 11.2 million. Despite this increase in consumption the carry-over on August 1, 1943 will be larger than at the beginning of this season.

WHERE practicable, producers of short-staple cotton are urged either to shift to varieties having a staple length longer than 1 inch or to shift to other crops for which the need is greater. The wide premiums and discounts now prevailing will encourage this shift.

Production of American-Egyptian cotton is currently estimated at about 96,000 running bales which, with a carry-over of about 25,000 bales, gives a prospective supply of 121,000 bales, enough to last domestic mills until January 1, 1945, at the May-September average consumption of 4,383 bales per month. Consumption of American-Egyptian cotton may be held down somewhat during the next few months by the increased use of imported Egyptian cotton which has recently been underselling American-Egyptian cotton at New England mill points by as much as 8 cents per pound. However, total consumption of extra-long staple cotton this season probably will be sufficient to include most available imported Egyptian cotton and more American-Egyptian cotton than the 47,000 bales consumed in 1941-42.

The Arizona farm price remained between 39.7 cents and 41.0 cents per pound from mid-April through mid-September, but an increase of 3.5 cents per pound in the Government purchase price caused the farm price to advance to 44.0 cents on October 15. This compares with a range of from 29.8 cents to 32.2 cents during the corresponding period last year.

WOOL shorn this year is bringing farmers the highest prices since 1925, and cash farm income from sale of wool in 1942 probably will exceed 150 million dollars, a new record high. With prices for most wools close to the ceilings, it is unlikely that prices in 1943 will show much change from current levels.

The quantity of wool shorn or to be shorn in 1942 is expected to establish a new record of about 392 million pounds or slightly above 1941 and 30 million pounds above the 1936-40 average. In addition, the production of pulled wool is expected to be about the same as the 1941 total of 66 million pounds.

The carry-over of wool into 1943 will be large but stocks will consist mostly of imported wool held as a Government stock pile. Domestic growers are assured an outlet for the entire 1942 clip by Army orders for fabrics requiring the use of 100 percent domestic wool.

Mill consumption of apparel wool totaled 700 million pounds (grease basis, shorn and pulled) in the first 8 months of 1942, a gain of 15 percent over the corresponding period last year. A continuation of this rate will carry consumption for the calendar year above 1 billion pounds for the first time on record. Consumption of apparel wool for civilian purposes has been sharply curtailed, but this decline has been much more than offset by the increased military demand. Current levels are expected to be about maintained in 1943.

Wool production next year may be slightly below the 1942 record level of about 460 million pounds (grease basis, shorn and pulled). The large slaughter of sheep and lambs in 1942 may reduce the number of sheep to be shorn while military requirements for shearling pelts may result in a smaller production of pulled wool.

MOHAIK was less in demand after the discontinuance of automobile manufacture since about 65 percent of

the mohair formerly consumed was used in pile fabrics for automobile upholstery. Consequently, prices so far this year are reported to have been below those of 1941 when the average farm price was 57 cents per pound.

The outlook for mohair prices in the 1943 season depends to some extent upon the demand for mohair for civilian uses, particularly apparel fabrics, since it is not used extensively in military fabrics. More mohair is expected to be used in men's summer suits and heavy coatings as a result of restrictions on the manufacture of apparel wool for civilian use.

Stocks of mohair in August totaled about 19 million pounds and were held mostly by country buyers. The fall clip now being shorn is estimated at about 8 million pounds and total production this year may be about 21 million pounds. Demand for the fall clip is likely to be slow until mills replenish their stocks.

HEMP production is being encouraged to relieve a threatened shortage of rope and twine. About 37,000 acres of hemp were planted for seed in Kentucky in 1942. This acreage is expected to produce sufficient seed for about 300,000 acres for fiber and at least 50,000 acres for seed in 1943. Plantings in 1943 are expected to be concentrated in Kentucky, Indiana, Illinois, Wisconsin, Minnesota, and Iowa. Since there are now only 5 hemp-processing mills in operation the larger acreage will require a marked expansion in plant facilities. Consequently as many as 71 additional mills may be built under a Government-financed program. They will be placed adjacent to planting areas to assure immediate processings once the hemp is harvested. The Requirements Committee of the War Production Board has already approved use of the needed materials for the construction of the mills in a ratio of one mill for each 4,000 acres of hemp. The Government is also financing a training program for mill managers who will

supervise the new mills when they are completed.

FLAX (for fiber) acreage increased sharply in 1942, advancing from about 11,500 acres in 1941 to about 18,000 to 19,000 acres this year. Prices are not much different than last season but they are well above earlier years. Although several new mills are now in operation, the normal production of flax in the straw expected from the 1942 acreage would likely be in excess of the normal capacity of existing plants to prepare the fiber from the straw. Exceptionally favorable yields such as last year and this have caused a rather tight mill situation. The outlook for flax supplies appears favorable since domestic production can be supplemented with imports.

VEGETABLES Truck crop production is expected to be somewhat smaller next year in view of anticipated shortages of labor, materials, and transportation facilities. Even if the acreage of fresh vegetables remains about the same in 1943 as it was in 1942, yields next season may be considerably smaller than the excellent yields of 1942.

SIGNIFICANT reductions in the acreage of some fresh vegetables are likely to occur, particularly in the Western States where labor and transportation shortages already have been experienced. Shortages of transportation facilities may influence shifts in fresh vegetable areas and determine to some extent the type of vegetables which will or will not be grown. Plantings of such crops as watermelons, cantaloups, cucumbers, lettuce, and celery are not likely to be as large as last year. Farmers are aware of the expected labor shortage for growing and harvesting crops and realize that transportation facilities may be difficult to obtain for bulky, highly-perishable vegetables which must be hauled long distances. Increased plantings are expected for

such crops as carrots, snap beans, onions, sweet corn, tomatoes, cabbage, and lima beans.

Purchasing power is expected to be greater in 1943 than it was in 1942. Moreover, the fact that there are price ceilings on most food products may divert purchasing power to commodities that are without a ceiling price. These factors together probably will expand greatly the demand for truck crops. This increased demand together with an expected decrease in production probably will cause truck crop prices to continue to rise in 1943 unless they are placed under price controls.

The outlook for processing vegetables is very uncertain because tin allocations for next year are still rather indefinite. Production of processing vegetables likely will be somewhat smaller than this year, even though there is no change in planted acreage because the generally favorable growing conditions of 1942 may not be repeated next season. Moreover, the supply of labor for harvesting and canning as well as the supply of transportation facilities probably will be limiting factors in 1943.

UNDER the stimulation of generally favorable prices for the 1942 potato crop and probable continuation of relatively high prices in 1943, it is likely that potato acreage in most States will be at least maintained and possibly increased in 1943. Yields have been high for the past 3 years and the 1942 yield is expected to set a record of about 135 bushels per acre, compared with 126 bushels for the 5-year average 1937-41. Average yields and an acreage equal to this year would not provide a supply of potatoes adequate to meet our needs. Under the influence of increased purchasing power and large Government requirements, demand for potatoes is expected to continue to increase in 1943. As a result of increased demand and the possibility of a potato crop only slightly larger than in 1942, there

will be a strong upward pressure on prices in 1943. However, potatoes have been placed under price ceilings.

THE large supply of dry beans probably will be adequate to meet our needs and provide a carry-over greater than the average of recent years. Maintenance in 1943 of approximately the level of prices supported in 1942 by the Department of Agriculture's dry bean purchase program should be adequate to induce farmers to plant a substantially larger acreage than they planted in 1942.

The acreage of dry beans may increase by 15 to 20 percent over 1942. However, the favorable growing conditions and yields of 1942 may not prevail next year. Even though dry bean acreage is increased by 15 to 20 percent above 1942, only about 21 million bags would result if yields are about average next season. Most dry bean growers can expect to receive a fairly high price despite a succession of record dry bean crops.

FRUIT In 1943, fruit growers in general will receive higher prices for their crop than the average prices they received in 1942. However, ceiling prices at the retail level have been temporarily established for citrus fruits, and they may be placed on some other fresh fruits during the next year.

IT is likely that the fruit crop in 1943-44 will be slightly smaller than the bumper crop in 1942-43. Since military and lend-lease requirements in 1943-44 will be substantially above those for the preceding years, the total amount of fruit on a fresh equivalent basis available for civilian consumers will be considerably less.

The decrease from 1942-43 in the total supply of fruits marketed fresh, probably will be greater than the decrease in total production. Although the quantity of fruit canned may be smaller than a year earlier because of tin plate restrictions, the quantity

dried is likely to be substantially increased. Therefore, the total quantity used for canning and drying will be larger than in 1942-43.

The War Production Board, through a recent order, acted to prevent the depletion of canned fruit and juice stocks before the 1943-44 pack comes on to the market. This order prohibits canners from shipping during certain periods more than a specified percentage of their packs available for civilian consumption. For instance, at least 30 percent of their total civilian supply cannot be shipped prior to April 1, 1943. Since the civilian demand for canned fruits this season at ceiling prices is greater than the supply available, there would have been little or no stocks available toward the end of the current season if inventory controls had not been instituted.

THE orange and grapefruit crops that will be marketed from this fall to next may easily be the largest on record. On October 1 it was indicated that the production of oranges, excluding California Valencias, would total 58,600,000 boxes compared with 53,800,000 in 1941-42. The production of grapefruit, excluding California "other" varieties, was indicated to total 45,200,000 boxes compared with 38,700,000 in the preceding season. The demand for both of these fruits for processing will be exceptionally great since large quantities of concentrated orange juice are desired for lend-lease shipment, and the grapefruit juice pack may be of record size. Supplies of oranges and grapefruit for fresh sale will be large during the winter and spring of 1943.

Retail price ceilings have been established for fresh citrus fruits, excluding grapefruit, at the highest price prevailing from September 28 to October 2. Retail price ceilings of fresh grapefruit have been fixed in such a manner that they will average roughly 10 cents per grapefruit, or the retailer's

cost plus 2½ cents, whichever is lower. The 10 cent price for grapefruit represents the average price in localities in which grapefruit was sold between September 28 and October 2. During this period California was the only State shipping oranges and grapefruit, and orange and grapefruit prices were close to their seasonal peaks.

At this time it appears likely that the 1942-43 weighted average price received by growers for oranges and grapefruit (sold for fresh consumption and for processing) will be at least 15 percent and 5 percent higher respectively than the weighted average in 1941-42.

TOBACCO Prices for most types of tobacco will be higher for the 1942 crop than they were for the 1941 crop. Returns to farmers for flue-cured and Burley will be the highest on record and prices will be the highest since 1919. High prices for 1942 crop would lead farmers to plant much larger acreages next season if it were not for marketing quotas, the limited quantities of land and labor available, and the imperative need for increased production of strategically important food and fiber.

THE indicated production of all tobacco in 1942 is more than 1.4 billion pounds, or nearly 13 percent more than in 1941. Farmers are expected to harvest 808 million pounds of flue-cured and 347 million pounds of Burley compared with 650 million and 338 million pounds, respectively, last year. The production of Maryland will be larger, but smaller quantities of dark types and cigar tobaccos have been grown.

Notwithstanding increased production of the most important kinds of leaf, the consumption of tobacco products is rising and stocks of most types of leaf will be smaller at the beginning of next season. Tax-paid

withdrawals of cigarettes, cigars, and snuff in the fiscal year 1941-42 were 14 percent, 7 percent and 8 percent respectively above the corresponding period a year earlier. Withdrawals of cigarettes continue to increase and the manufacture and consumption of them will establish a new record high this year. The production and consumption of cigarettes are coming to exceed tax-paid withdrawals by a widening margin due to the increasing manufacture of tax-free cigarettes for use by men in the armed services outside of the United States. Contrary to previously prevailing trends, the use of chewing tobacco and snuff has been increasing during the war. This probably is the result of the fact that more and more people are working under conditions which do not permit smoking.

PRICES for flue-cured leaf sold so far this season have averaged more than 38 cents per pound. Flue-cured prices have been under a ceiling since August 31, but prices have continued strong within the limits permitted by the ceilings. The sharpest price increases as compared with previous years have been in the lower grades. Ceiling restrictions do not apply to purchases made from funds of the Commodity Credit Corporation. Purchases with these funds are expected to total more than 200 million pounds from the 1942 crop.

Lend-lease shipments of flue-cured tobacco are continuing in considerable volume. Between April 1, 1941 (when lend-lease was applied to tobacco) and September 11, 1942, nearly 260 million pounds on a farm weight basis were shipped or delivered for shipment. Almost all of the tobacco acquired by Commodity Credit from the 1939 crop, half of the purchases from the 1940 crop and one-tenth from the 1941 crop have been shipped under lend-lease arrangements.

Home-Grown Nitrogen

NITROGENOUS fertilizers are becoming scarce. Boats that once brought in supplies of nitrate of soda from Chile are now needed elsewhere. Much inorganic nitrogen that once stimulated the growth of cotton, corn, tobacco, vegetables, and other crops is being made into explosives. No one can say at this time just how short our supplies of nitrogen for agriculture will be in 1943. But already plans are being made to restrict its use, especially in less essential lines.

In past years, farmers did not worry much about shortages of fertilizer. In general, they did not make full use of home-produced manures, unfed roughages, cover crops, and summer legumes. But in 1943 they must be prepared to counteract losses of nitrogenous fertilizers with legumes, farm manures, crop rotations, and all of the experience and ingenuity of American dirt farmers. Minimum requirements of nitrogen for agriculture in the United States in 1943 are estimated at 426,000 tons. This is about equivalent to the nitrogen which would be furnished by 2.5 million tons of nitrate of soda.

SINCE most of the nitrogenous fertilizer is used in sections of the country where livestock are not of great commercial importance, farm manures can be used as a replacement to only a limited extent. In the principal nitrogen-consuming areas, however, summer and winter legumes are not only feasible but their acreages are increasing each year. In 1943 legumes will be needed more than ever before, although further changes to fit them into cropping systems will not be easy. Shortages of labor, seeds, and land for these soil-building crops will make their use difficult, especially now when there is a strong incentive to grow cash crops. Furthermore, legumes cannot be used as a source of nitrogen for some crops, such as certain types of

tobacco, whose quality is materially reduced if they are grown directly following a legume crop.

In 1941 about 3 million acres were planted to winter legumes. It is likely that the 1942 fall planting has been substantially larger. Winter legumes ordinarily add to the soil about 25 pounds of nitrogen per acre, so a 2-million acre increase in legumes would save the equivalent of the nitrogen in 150,000 tons of nitrate of soda. Winter legumes also contribute in several other ways to soil improvement. They reduce soil erosion, add humus, and conserve plant food by reducing losses through leaching. Use of summer legumes especially for interplanting with corn, has already become common as a means of soil building, and further increase in such acreage next year will make a still greater addition to nitrogen supplies for 1944 crops. To grow these legumes satisfactorily, three things are necessary: applications of phosphates, inoculation and early seeding.

TOTAL production of animal manures in 1940 was probably about 950 million tons. Of this quantity, around 250 million tons—or about one-fourth of the production—was hauled from barns and feedlots, and applied principally to cropland. In 1943, total production of manure will exceed the 1940 figure by about 80 million tons. On the average, 30 tons of farm manure contain as much nitrogen as 1 ton of nitrate of soda. This means that in 1943 there will be an equivalent of about 34 million tons of nitrate of soda in total manures produced, exceeding the quantity produced in 1940 by an equivalent of 2.7 million tons of nitrate of soda. Since about a fourth of all manure produced is used on cropland, this increase will replace in part the dwindling agricultural supplies of nitrate of soda.

It is known that the fertilizing value of manure increases as livestock are fed more concentrates. More concentrates than usual can be fed in the 1942-43 feeding season. The combined production in 1942 of vegetable protein concentrates, chiefly soybean, cottonseed, peanut, and linseed meal, will be about 2 million tons above the previous high production of 1941. This additional 2 million tons will contain about as much nitrogen as 800,000 tons of nitrate of soda. Under ordinary conditions, more than one-half of this nitrogen can be recovered from manures after the concentrates have been fed to livestock, although losses in care and handling of the manure tend to lower the actual amount that is recovered.

Some question exists, of course, as to whether all of the large supply of protein feeds available from the 1942 crops will be fed to animals. Although favorable prices for livestock and livestock products promise to stimulate feeding of protein concentrates, the supply is so large that even after making allowance for some increase in the number of animals there will still be more than 25 percent more protein concentrates for each animal on farms than in 1942. Because of this, farmers may use some of the large supply of the oilseed meals directly for fertilizer, although nitrogen from this source would probably cost twice as much as inorganic nitrogen. Organic nitrogen is less soluble and slower acting than inorganic nitrogen. For good results from most crops, not more than one-third to one-half of the total nitrogen should be supplied from organic sources.

THE South Atlantic and South Central States taken together use about two-thirds of the Nation's commercial fertilizer, including mixed fertilizers and nitrate of soda for top dressing and for side application to cotton and other crops. Since livestock numbers in these regions are relatively small

and cattle feeding for market is not generally practiced, the increase in farm-manure production expected in 1942-43 will be very small in relation to the nitrogen needs of these regions. Practically every acre of corn in the Southeastern States, and in the eastern areas of the South Central States, could well be interplanted with legumes such as cowpeas, soybeans, and velvet beans, while legumes in meadows and pastures can store up plant food and humus that frequently will raise corn yields from 15 bushels per acre to well over 25 bushels.

In most other sections of the country, manure supplies are the principal replacement for nitrogenous fertilizers. The Middle Atlantic and East North Central areas each utilize about 11 percent of the United States total tonnage of commercial fertilizers. True, farmers in these States have large numbers of dairy cattle, beef cattle, and hogs, and will find it both feasible and profitable to obtain more of their nitrogen requirements by heavier feeding of protein concentrates and wise conservation and application of manures. But some crop specialty farmers who use large quantities of fertilizer do not have enough livestock to supply any significant amount of fertilizer.

The West North Central States use only about 2 percent of the Nation's commercial fertilizer but in 1943 will produce more than half of the increase of 80 million tons of manure. Hence, replacement of nitrogenous fertilizer in this region should present no great problem. In New England, where a little more than 4 percent of the commercial fertilizer is used, increased feeding of dairy cattle is also increasing the supply of manure for fertilizer. In this area the large number of dairy cattle and the small amount of tilled crop acreage usually result in a greater use of manure per acre of cropland than in any other region.

—M. R. COOPER and A. P. BRODELL

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935- 39= 100) ¹	Income of industrial workers (1935- 39= 100) ²	Cost of living (1935- 39= 100) ³	1910-14=100					Farm wage rates
				Whole- sale prices of all com- modities ⁴	Prices paid by farmers for commodities used in—			Prices paid, interest, and taxes	
					Living	Produc- tion	Living and pro- duction		
1925	90	126	125	151	163	147	156	170	176
1926	96	131	126	146	162	146	155	168	179
1927	95	128	124	139	160	144	153	166	179
1928	99	127	123	141	160	148	155	168	179
1929	110	134	122	139	159	147	154	167	180
1930	91	110	119	126	150	141	146	160	167
1931	75	85	109	107	128	123	126	140	130
1932	58	59	98	95	108	109	108	122	96
1933	69	61	92	96	108	108	108	118	85
1934	75	76	96	109	122	123	122	128	95
1935	87	87	98	117	124	127	125	130	103
1936	103	100	99	118	123	125	124	128	111
1937	113	117	103	126	128	136	131	134	126
1938	89	91	101	115	122	125	123	127	125
1939	108	105	99	113	120	122	121	125	123
1940	123	119	100	115	121	124	122	126	126
1941	156	163	105	127	131	131	131	134	154
1941—October	164	179	109	135	140	138	139	141	165
November	166	180	110	135	142	139	141	143	—
December	168	187	110	137	143	141	142	143	—
1942—January	172	196	112	140	146	145	146	146	166
February	172	194	113	141	147	147	147	147	—
March	171	195	114	142	150	149	150	150	167
April	173	203	115	144	152	149	151	151	177
May	172	209	116	144	153	150	152	152	—
June	176	216	116	144	154	150	152	152	183
July	180	229	118	144	154	150	152	152	202
August	183	233	117	145	155	150	153	152	—
September	185	236	118	145	151	151	154	153	—
October	—	—	—	—	158	151	155	154	220

Year and month	Index of prices received by farmers (August 1909-July 1941=100)								Ratio, prices received to prices paid, interest, and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals ¹	Dairy products	Chickens and eggs	All groups	
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	128	144	121	140	155	144	139	84
1928.....	130	162	176	159	151	158	153	149	89
1929.....	120	144	141	149	136	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	62
1932.....	44	47	82	102	63	83	82	65	53
1933.....	62	64	74	105	60	82	75	70	59
1934.....	93	99	100	108	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	144	131	122	122	91
1941—October.....	101	144	107	161	154	145	146	139	99
November.....	103	136	98	147	149	148	137	135	94
December.....	112	138	98	156	157	153	143	140	100
1942—January.....	119	143	102	204	164	147	144	149	102
February.....	121	150	98	161	173	147	144	149	99
March.....	122	151	111	136	180	144	130	146	97
April.....	120	158	113	138	190	142	131	150	99
May.....	120	159	131	152	189	143	134	152	100
June.....	116	153	143	169	191	141	137	151	99
July.....	115	155	131	200	193	144	145	154	101
August.....	115	151	126	236	200	151	156	153	107
September.....	119	158	129	191	195	156	156	153	107
October.....	117	158	134	226	200	165	173	169	110

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised November 1941. ³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5. ⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the index also includes transportation. The production index is based on volume only, whereas the index is affected by wage rates as well as by time worked. There is usually a time lag between the volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

FARM PROGRAMS FOR 1943

THE

AGRICULTURAL

SITUATION

DECEMBER 1942

A Brief Summary of Economic Conditions

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FARMERS WILL MEET their greatest test in 1943 as food needs mount with each new military or naval campaign. There are limits to the quantity of cropland and of skilled farm labor. These in turn will limit total production. Demand will outrun supply for a growing number of foods. Production goals for 1943 call for efficient use of every acre of cropland, every hour of labor; for effective use of all agricultural resources. Agricultural programs of credit, loans, payments, and price-supports, education, research, technical assistance, crop insurance, and marketing are all being geared to help farmers produce to the limit. The Department of Agriculture is working constantly with other branches of the Government to help shape the over-all war programs in a way that will facilitate all-out food production. Many of the 1943 goals are minimums, particularly those for hogs and milk. If farmers can exceed them, so much the better. It will mean greater stockpiles for the day when occupied regions of Europe and Asia are liberated. No one in the United States will go hungry, but the fighting men come first. The variety of diet left for civilians will depend in large measure on how well agriculture does its job in 1943.

Commodity Reviews

PRODUCTION: 1943 Goals

Farmers apparently reached the practical limit of total crop acreage in 1942. Therefore, the 1943 production goals call for roughly the same total acreage—which will mean decreased crop production if yields drop back to normal from the record high yields reached this past year. That prospect makes it all the more important for farmers to make efficient use of every acre and to shift where necessary from less essential to more essential crops. Livestock goals for 1943 call for at least a 10-percent increase in total production. Farmers will be urged to exceed the goals for hogs and milk, particularly, if at all possible.

The greatest shifts requested in crop acreage for 1943 would bring about the following approximate changes as compared to the actual acreages estimated for 1942: 4 million acres more corn, 1.3 million acres more peanuts, 800,000 acres more grain sorghums, 300,000 acres more Irish potatoes, 400,000 acres less soybeans for beans, 3.3 million acres less oats, 1.5 million acres less cotton, and 1 million acres less wheat.

Livestock goals call for 15 percent more pigs, slaughter of 9 percent more cattle and calves, production of 2 percent more milk (an increase of 2 billion pounds), 8 percent more eggs, and 28 percent more pounds of chicken for meat. These and other goals for 1943 will be discussed in detail in the January issue of *The Agricultural Situation*.

Preliminary estimates for 1942 indicate that production of virtually all commodities this year except peanuts, potatoes, canning tomatoes, canning peas, hogs and milk, equalled or exceeded the 1942 goals announced last January. Total livestock production was at or slightly above the goals, total crop production was around 15

percent above the goals, and production of crops and livestock together was 5 percent above the goals.

LABOR: Deferment

A recent amendment to the Selective Service Act directs local draft boards to defer men between 18 and 45 years old who are regularly employed in farm work essential to the war effort. This does not include seasonal or temporary workers.

Selective Service asked the Department of Agriculture to assemble information that can be used to establish a uniform policy of determining what types of agricultural occupations are essential. Meanwhile, Selective Service Boards are to consult with County USDA War Boards in making such decisions. Deferred workers will not lose their deferment if they change from one necessary farm job to another, but they should first consult with their local board. If a deferred worker moves from a farm job into industry without a permit, he will be immediately reclassified into I-A. A local board cannot release for enlistment in the armed services a farm worker entitled to deferment in class II-C or III-C.

This program is expected to be particularly helpful in maintaining or increasing production on livestock farms. The Department of Agriculture and the United States Employment Service will cooperate in training and recruiting labor for such farms.

Total employment on farms November 1 was 10,879,000—down seasonally about 1 million from the preceding month and up slightly from November 1941. However there were more women, children, and townspeople in the farm labor force.

During the 12 months ended in September more than 900,000 farm workers and operators took jobs in industry, and nearly 600,000 went into the armed forces. There was a net

decrease of nearly half a million men 18 to 44 years old, working on farms. Biggest increase was nearly 160,000 more boys and girls 14 to 17. Other increases: Nearly 150,000 more men 45 and over; more than 75,000 more women 18 and over; and more than 70,000 more children under 14.

Two-thirds of the farmers interviewed said their farms could handle as much crops and livestock next year as in 1942, taking labor prospects into consideration; one-third said they could not. But two-thirds of the farms 1,000 acres and over expected decreased production in 1943. Those are the farms with the largest percentage of draft-age men.

Latest figures on farm wage rates (reported quarterly) are 220 percent of the 1910-14 average, as of October 1, 1942.

PRICES: Ceilings, Floors

Strong demand for agricultural commodities for military, lend-lease and civilian consumption is expected to hold the prices of most commodities at or near ceiling levels during the coming year, with some exceptions in the seasons of heaviest marketings.

Fully 90 percent of the foods bought by the average family have been under price ceilings since October 3—compared to 60 percent before Congress revised the law. The law now permits ceilings to be placed on farm or farm-derived products at a price that will reflect to producers 100 percent of parity or the highest price they received between January 1, 1942 and September 15, 1942, whichever is higher.

Most of the price ceilings announced last April were based on the highest prices charged by individual sellers in March; whereas ceilings announced in October were based on prices charged from September 28 through October 2. The Office of Price Administration has announced that its policy will be to work toward replace-

ment of the base-period ceilings for individual food processors with definite dollar-and-cents schedules; and generally to replace the ceilings at wholesale and retail levels with margin controls.

The Act of October 2 authorizes loans on the basic commodities at 90 percent of parity, with permission to set them at 85 percent of parity where necessary to hold down feed costs and encourage livestock production. Thus, loans will be made at 90 percent of parity on cotton, rice, tobacco and peanuts; and at 85 percent of parity on corn and wheat.

Moreover, the law authorizes price supports at not less than 90 percent of parity, within the limit of funds available, on all other commodities for which the Secretary of Agriculture publicly requests increased production. These loan rates and price supports are to continue in force at not less than these levels until two years after the close of the year in which the war ends.

MARKETING AND TRANSPORTATION: Problems

The Department of Agriculture announced that it cannot assist with the production or marketing of less essential winter vegetable crops, with the result that these commodities may become subject to marketing and transportation difficulties.

Charges for marketing 58 important food products increased 1 percent from mid-September to mid-October. Payments to farmers for food products contained in the family food basket were \$224 in October, up 3 percent from the preceding month. The farmer's share of the retail dollar held at 54 cents for the third consecutive month.

Although crushing capacity for oilseeds is adequate for the country as a whole, mills are not well located with respect to the present areas of supply of beans and seeds. While excess capacity exists on both coasts and in

the South, capacity in the Midwest is not adequate to handle the large soy-bean crop there. The solution will necessarily lie in moving the beans to the mills or moving the mills to the source of production.

RATIONING: Farm Supplies

Milk cans and farm fencing have been added to the list of supplies which will be rationed by the Department of Agriculture. Farm fencing includes barbed wire, woven or welded wire fence, poultry netting and poultry flooring. Milk shipping containers included are those with "a substantially cylindrical shape, a coating of tin or substitute sanitary coating, and a necked-in top so that the opening is smaller than any part of the body cylinder."

DEMAND: Rising

Industrial production reached 188 percent of the 1935-39 average by October, a rise of 12 points from June. In the preceding 5 months, the index has risen only 4 points. From March to September factory pay rolls rose 24 percent, after adjustment for seasonal variation, and the wage income of industrial workers rose 21 percent.

Despite an expected increase of 7 billion dollars in consumer expenditures and 3 billion in taxes in 1942 as compared with 1941, the excess of income over expenditures will increase to around 25 billion dollars. In 1943, the rise in consumer income probably will exceed the increase in personal taxes by around 10 billion dollars, and the amount of goods and services available to civilians will be reduced.

PORK: New Ceilings

Wholesale prices of almost all cuts of pork are now covered by dollars-and-cents ceilings, replacing individual ceilings set for each seller at his March 3-7 level. Price ceilings for each

variety of wholesale cuts will be based on the central zone, which includes all of Iowa and parts of nearby States between the thirty-ninth and forty-fifth parallels and the ninety-first and ninety-ninth meridians.

Examples (central zone, dollars per 100 pounds): grade A sliced bacon, 34.50 cents; smoked skinned hams, under 14 pounds, 33.00; Boston butts, fresh, average 4-8 pounds, 29.25; smoked picnics, 28.50; spare ribs, fresh, 19.25. For the Chicago zone, which includes parts of Wisconsin and Illinois outside the central zone and St. Louis, Mo., add 25 cents per 100 pounds. Prices outside the central and Chicago zones will be the central zone base price, plus a specified freight differential.

The new ceilings are expected to help restore normal distribution of pork supplies among market areas.

Farmers apparently are feeding hogs to heavier weights than usual as a result of the exceptionally favorable hog-corn price ratio. In mid-November, 100 pounds of live hog was worth 17.7 bushels of corn (U. S. average at local markets) as compared with 15.2 in November 1941 and with the 20-year average (1922-41) of 12.3 for November. Inspected slaughter in October totaled 4.2 million head, 10 percent more than in September but only 2 percent more than in October last year. This indicates that there will be exceptionally heavy marketings because the spring pig crop was 25 percent greater in 1942 than in 1941. The favorable feeding ratio will be a strong incentive to attainment of the 1943 goal—a 15-percent increase in the pig crop.

CATTLE: Supplies

Favorable relationships this fall between prices of feeder cattle, feed and fat cattle, indicate large numbers of cattle will be fed again in the 1942-43 season.

By early November, prices of well-finished cattle were the highest since 1937, and other slaughter cattle were

selling at or above previous highs of 1942. Unusually strong demand more than offset the increase in supplies. Slaughter supplies will decrease seasonally in the next month or two, but will continue large throughout 1943. Calves slaughtered this fall averaged unusually heavy, due in part to increased slaughter of beef breeds.

Shipments of stocker and feeder cattle into the Corn Belt in October probably set a record for the month. They were up nearly 20 percent from October 1941.

In November, the civilian beef quota for the period from October 1 to December 1 was reduced another 10 percent. Slaughterhouses were ordered by OPA to cut their deliveries of beef for civilian use from 80 to 70 percent of deliveries during the last quarter of 1941. OPA also eliminated the provision which permitted a slaughterer to overrun his beef quota by 10 percent in any quarter and take this amount out of his quota for the next quarter.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid interest and taxes	Buying power of farm products ¹
1941			
January.....	104	128	81
February.....	103	128	80
March.....	103	129	80
April.....	110	129	85
May.....	112	130	86
June.....	118	132	89
July.....	125	133	94
August.....	131	136	96
September.....	139	138	101
October.....	139	141	99
November.....	135	143	94
December.....	143	143	100
1942			
January.....	149	146	102
February.....	145	147	99
March.....	146	150	97
April.....	150	151	99
May.....	152	152	100
June.....	151	152	99
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	169	154	110
November.....	169	155	109

¹ Ratio of prices received to prices paid, interest and taxes.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average, August 1909-July 1914	November average, 1909-13	November 1941	October 1942	November 1942	Parity price, November 1942
Wheat (bushel).....	88.4	87.3	93.4	103.5	104.4	137.0
Corn (bushel).....	64.2	59.4	63.7	77.5	75.9	99.5
Oats (bushel).....	39.9	38.2	41.1	43.2	44.3	61.8
Rice (bushel).....	81.3	.....	123.2	139.6	146.9	126.0
Cotton (pound).....	12.4	12.1	15.78	18.87	19.22	19.22
Potatoes (bushel).....	69.7	61.4	77.4	102.5	108.4	111.5
Hay (ton).....	11.87	11.89	8.71	9.39	9.84	18.40
Peanuts (pound).....	4.80	4.5	4.61	5.77	5.94	7.44
Peanuts for oil (pound).....	.....	.....	3.84	4.04	4.04	3.64
Apples (bushel).....	.96	.80	.98	1.14	1.24	1.49
Hogs (hundredweight).....	7.27	6.97	9.70	14.11	13.44	11.27
Beef cattle (hundredweight).....	5.42	5.19	8.82	11.36	11.39	8.40
Veal calves (hundredweight).....	6.75	6.72	10.75	13.02	13.02	10.46
Lambs (hundredweight).....	5.88	5.34	9.70	11.84	12.05	9.11
Butterfat (pound).....	26.3	28.5	36.7	46.5	47.8	43.3
Milk, wholesale (100 pound).....	1.60	1.84	2.66	2.83	2.89	2.73
Chickens (pound).....	11.4	10.8	15.5	19.5	19.6	17.7
Eggs (dozen).....	21.5	27.8	35.5	37.4	38.9	47.0
Wool (pound).....	18.3	18.5	36.6	39.7	39.7	28.4
Tobacco:						
Flue-cured-types 11-14.....	22.9	.....	24.2	.....	40.0	28.6
Maryland-type 32.....	22.9	.....	25.0	.....	28.5	22.4

¹ Revised.

² Post-war base.

³ Adjusted for seasonality.

⁴ Base price crop years 1934-38.

⁵ Price comparable to parity.

POULTRY: Marketings

Farm marketings of poultry in the Midwest have been much heavier this fall than last, and the into-storage movement of poultry has been unusually large.

Although supplies of eggs in some eastern markets were relatively short, production on farms has been much larger than it was in the autumn of 1941 and is now increasing seasonally. Receipts of eggs have been larger than they were last fall at both primary and terminal markets.

Permanent price ceilings for turkeys were announced November 7, at approximately the market prices prevailing September 15, which were 35 to 50 percent higher than a year earlier. Temporary price ceilings announced October 5 were still in effect by December 1 on wholesale and retail prices of all eggs and on all classes of poultry except turkeys.

FEED: Record Supplies

Supplies of corn, oats, barley, and grain sorghums totaled the largest on record at the start of the marketing year (October 1). On the basis of November crop report they were estimated at 136 million tons, 12 percent larger than last year. Feed supplies per animal unit are about the same as at the beginning of marketing years in 1940 and 1941—larger than for preceding years. Production this year appears to be large enough to feed increased numbers of livestock in 1942-43 without reducing the carry-over. Price ratios in most cases are favorable for livestock feeding.

November reports indicated a 1942 corn crop of 3,185 million bushels—115 million above the previous record in 1920, and a half billion bushels larger than in 1941.

Oilseed mills, although operating at capacity, have a ready market for cake and meal. Feed mixers and manufacturers are buying much of the soybean meal on a contract basis,

leaving but little for the wholesale market.

MILK: Heavy Demand

Demand for milk will increase sharply in 1943, exceeding production. Restrictions on civilian consumption will be needed to insure adequate supplies for military and lend-lease purposes.

Since November 3, manufacturers have been required to set aside at least 90 percent of the spray-dried skim milk they produce, for delivery to the Government. This type of milk is urgently needed for lend-lease and military use.

Butter stocks November 1 were 33 percent below the 1935-39 average for that date. Production of butter, cheese and evaporated milk this fall has been below production in the same period last year. Total stocks of evaporated milk, including Government holdings, have been unusually large, but manufacturers' stocks on October 1 were the third smallest for that date since 1922.

FATS, OILS: Increasing

Production of fats and oils from domestic materials in 1943 probably would reach 12 billion pounds, if butter production could be held at 1942 levels. However, increasing civilian demand for milk and cream plus heavier military and lend-lease buying of dairy products may reduce the production of butter in 1943. Total production of fats and oils was 10.1 billion pounds in the 1942 calendar and 9.4 billion in 1941.

November crop reports lowered estimates of the peanut crop (for harvest) by more than 110 million pounds, and also lowered estimates of cottonseed production. On the other hand, they raised estimates of soybean production by more than 9 million bushels.

After reaching the lowest level in several years earlier in the fall, factory and warehouse stocks of primary fats

and oils are increasing now that crushing of the record 1942 crop of oilseeds is under way, and with restrictions on manufacturers' consumption of fats and oils.

Stocks of lard were abnormally low in November, and butter stocks were declining more than seasonally. Prices of most food fats and oils were at ceiling levels.

HEMP: Program

A program expected to yield around 150,000 tons of hemp fiber in 1943 for manufacture into cordage for military and essential civilian purposes has been announced by the Commodity Credit Corporation.

Hemp mills, 71 altogether, will be constructed in northern and central Kentucky, northern Indiana and Illinois, southern Wisconsin, northern Iowa, and southern and western Minnesota. Each plant will service about 4,000 acres of hemp. CCC contracts will be offered to farmers in the 6 States. Seed will be made available to growers at prices specified by the CCC, the amount to be deducted from payments for the crop next fall. Each mill will make available to farmers on a custom basis some 30 hemp harvesters and pick-up binders for harvesting the crop next fall.

FRUITS: Production

Commercial apple production in 1942 was estimated in November at 127,538,000 bushels—4.5 percent larger than the 1941 crop. Apple growers received an average of \$1.24 per bushel on November 15, which was 83 percent of parity and 26 percent above the price last November. Increased demand for apples and apple products this season is more than offsetting the effects of the slightly larger crop.

The peach crop this year is estimated to be 12 percent smaller than in 1941; and the grape crop is estimated to be 7 percent smaller. Pear production is

about 4 percent greater than last year. Production of oranges and grapefruit in Florida and Texas is apparently much larger than last season; but grapefruit production in Arizona is estimated at 2.8 million boxes compared with 3.4 million last season.

Citrus fruits were placed under temporary price ceilings on October 5, at the highest prices charged by individual sellers from September 28 through October 2.

VEGETABLES: Greater Production

Tonnage of commercial vegetables is estimated at 9 percent above the production last season, as a result of higher yields. The acreage in 1942 was not quite 1 percent above 1941. Fall crops of tomatoes and carrots are estimated to be larger than last season—most other crops are smaller. Greatest decreases are expected in snap beans, cauliflower, celery, eggplant, kale, lettuce, onions, green peppers, spinach, and green peas.

The canned pack of major processing vegetables was the largest on record—13 to 15 percent above last year—even though production of canned peas and tomatoes fell short of 1942 goals.

The 1942 crop of late potatoes was estimated in November at 294 million bushels as compared with 280 million last year. Potatoes were put under permanent price ceilings effective November 9. The Office of Price Administration established ceilings based on f. o. b. country shipping points for U. S. No. 1 grade white potatoes in bags, with variations for area, season, other grades and certain types of shipment.

COTTON: Loans

Increase of the Government loan rate on cotton from 85 to 90 percent of parity and the continued widening of premiums and discounts brought loan values of some grades and staples

above the market price. Trade demand for cotton was heavy during November, but reports indicated producers were holding considerable cotton. By November 28, the Commodity Credit Corporation had made loans on about 1,550,000 bales of 1942 crop cotton.

SHEEP AND LAMBS: Marketings

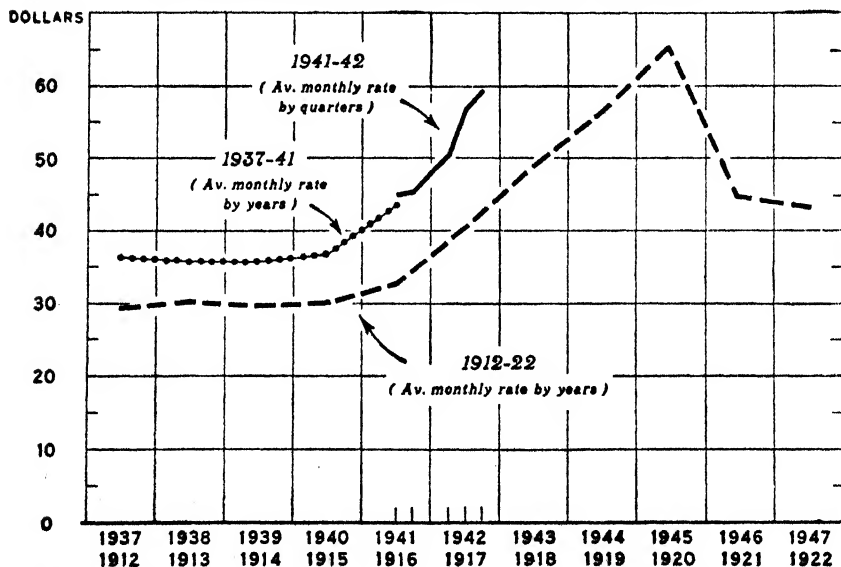
Heavy marketings of sheep and lambs this fall are the result of high prices and a shortage of skilled labor in the western sheep States. Slaughter under Federal inspection during October, a little over 2.3 million head,

was 39 percent above October last year.

The lamb crop was 2 percent smaller in 1942 than in 1941, but mature breeding stock and ewe lambs which normally would be held back account for the increased marketings. Sheep numbers were at an all-time high at the beginning of the year, and probably will not be greatly reduced by these marketings. Corn Belt feeders have been buying about as many lambs this fall as last, but there probably will be fewer lambs on feed in the Western States during the 1942-43 season than in 1941-42.

The relationship between prices of feeder lambs and prospective prices for fat lambs was favorable this fall.

**FARM WAGE RATES WITHOUT BOARD,
UNITED STATES, 1912-22, AND 1937-42**



U. S. DEPARTMENT OF AGRICULTURE

NEG. 42704 BUREAU OF AGRICULTURAL ECONOMICS

Farm wage rates per month were fairly steady from 1937 to 1940, though higher than in the corresponding period before World War I. They have gone up sharply since 1940, just as they did in the last war. Government agencies have been seeking to work out a practical means of stabilizing farm wages that will retain sufficient skilled labor on the farms to meet 1943 production goals, and that will assure an adequate level of living to farm laborers.

Price Control and Rationing in 1943

WAR has a habit of creating shortages that become more intense as time goes on. This country has reached that stage in the present war. The armed forces and our Allies need more and more supplies. Civilian buying power is increasing. Demand for goods is increasing more rapidly than we can increase production.

Fair sharing of scarce, essential goods—particularly of food, clothing, and supplies used in production—is imperative so that every civilian can devote his full energies to winning the war. Price control and rationing work together as a team to achieve this job of fair distribution. Price control makes sure that the poor as well as the rich can buy essential goods; and rationing makes sure that the last person to reach the store has the same chance as the first one, to get his fair share.

FOOD shortages in the United States were hard to imagine a year ago. Surpluses were fresh in everyone's mind. A year of record production was ending. Now we are near the close of another year of still greater production. But the demand for foods and other farm products has grown more rapidly than the supply, and we are approaching our limit of total agricultural production—unless we again have exceptionally good weather.

It may be necessary to ration food-stuffs on a rather broad scale although aside from meats, it is too early to say just what products will be rationed.

A shortage of one food leads commonly to increased demand for a substitute. Therefore, most food products will be subject to group or point rationing, rather than to individual rationing. Meats, for example may be grouped in one class. The consumer will be able to choose between kinds and amounts of foods in any particular class, within the limit of the

number of points he has received. This will mean variety of choice to satisfy individual tastes, and it will permit rationing authorities to shift consumption from one item to another as supply changes, by varying the number of points for any particular commodity.

Furthermore, price control can help to distribute supplies equitably. But it will have relatively little effect on the total volume of production. The chief limiting factors from now on will be manpower, cropland, farm equipment and supplies, storage, transportation and processing facilities. The emphasis will be on shifting production from less essential to more essential commodities. It will be necessary to provide greater flexibility by raising the prices of some commodities and lowering the prices of others to stimulate desirable changes in production. In the case of some farm commodities, either subsidies or higher prices to producers will be necessary to obtain the needed production. In other instances, subsidies will be essential to maintain ceilings at current levels.

PROMPT, vigorous action to halt inflation was necessary last April when the General Maximum Price Regulation was announced, and again in October when the ceilings were extended. A general freeze of maximum prices at levels prevailing in a definite base period was the only method of price control that could be adopted quickly enough. The defects in that method were recognized and steps are being taken to remedy them. Individual ceilings for each different food processor are being replaced as rapidly as possible by definite dollar-and-cents schedules, which will be the same for all processors in a specific market area. This will put all processors on an equal footing, and will make it easier for the Office of Price Administration to insure compliance. Similarly, the March

(or September 28 to October 2) ceilings at wholesale and retail generally will be replaced eventually with margin controls. Each type of food wholesaler and retailer will have a margin above his purchase cost which he cannot exceed in fixing his sale price. Margin controls will tend to equalize prices for like stores and will provide a needed flexibility as prices at the processor level are changed seasonally or for any other reason.

The Office of Price Administration has been working closely with the Department of Agriculture and the Office of Economic Stabilization in synchronizing price and production policies so as to help achieve the production goals being announced by the Department of Agriculture. The Office of Price Administration wants to foster the highest possible farm production consistent with expanded food needs and the overall program of economic stabilization.

THE farmer as a consumer has benefited from price control. During the last war, prices of farm machinery and equipment rose 74 percent. This time, the increase has been held down to 6½ percent in 3 years. If farm machinery prices had increased this time as they did before, the American

farmer would be paying \$230,000,000 more than he pays this year under price control. Fertilizer went up 86 percent in price during the last war. This time, it has been held to 13 percent with a saving to farmers this year alone of \$194,000,000. In October, farmers over the country as a whole were getting 110 percent of parity for their products, and the highest net income in their history—both in total and per capita. It is probable that their income will be even greater next year. During the latter part of the other war, production costs increased more rapidly than the prices of farm products. Whatever farmers may lose now through ceilings on the prices they receive will be more than made up to them later on by the ceilings on prices they pay, and by the Government's announced policy of continuing price supports after the war.

The policies of the Office of Price Administration in 1943—with respect to rationing, subsidies, and price control—will be guided solely by one objective: To increase the contribution of human and material resources to victory and to lessen the hardships of individuals now and after the war.

LEON HENDERSON, *Administrator,*
Office of Price Administration

October Marketings Set Record

The volume of farm products marketed during October was the largest for any month in the history of the United States. For that reason, cash income from marketings was also the largest for any month on record, totaling 1,976 million dollars. The previous high probably was in October 1919 inasmuch as marketings are normally heaviest in October and income in 1919 set a record broken only this year. Estimates on a monthly basis were not made until 1924.

Production per person on farms of agricultural commodities for sale or consumption in the farm home is more than two-fifths greater than it was in 1919.

AGRICULTURAL PROGRAMS FOR 1943

Soon after Pearl Harbor, the Department of Agriculture concentrated all its resources and energies on the job of waging total war. Agricultural programs for 1943 are being shaped to help farmers meet their food production goals. These programs will be modified as new needs or new problems arise.

Agricultural War Relations

THE program of the Office for Agricultural War Relations for 1943 is necessarily conditioned by the growing wartime stringencies as they affect the general farm picture.

OAWR has, on the one hand, certain activities which make it the farmer's representative in obtaining essential production supplies. These activities, which shall increase in 1943 as the need occurs, include the work of bringing into focus all considerations regarding agricultural needs and problems as related to the war, and coordinating the war work of the Department as a whole. It also assists the Secretary in maintaining effective communication between the Department and the war agencies in such matters as procurement, production, priorities and farm prices. On the other hand, as staff office for the Foods Requirements Committee, OAWR has well-defined responsibilities in furnishing data and other assistance regarding the distribution and allocation of food among all claimants—both foreign and domestic.

WHERE the Department is concerned, OAWR'S responsibilities are affected by and affect the entire group of programs which flow from Washington to State and County USDA War Boards and in turn reach the farmers of the Nation. For 1943, these programs can be grouped generally, as follows:

Farm labor.—The most serious problem before farmers in 1943 will be

getting enough help to plant, cultivate and harvest crops, and to produce livestock. The Department's over-all labor program has been designed to meet this problem so far as is possible, by training new workers, guiding adjustments in wage scales, transporting farm workers from one area to another, and other means. Under centralized direction, activities will continue, wherever feasible and necessary, with the War Manpower Commission, Selective Service, and the United States Employment Service in developing programs such as the one which provided for deferment of essential operators and workers on dairy, livestock and poultry farms.

Farm production supplies.—OAWR's responsibility will be to further coordinate the Department's work of representing the farmer as a claimant for a fair share of critical materials needed for essential food and fiber production. This will involve all production supplies—farm machinery, fertilizer, packaging materials, insecticides, fungicides and others—as to quantities needed for essential farm uses, and methods of distribution such as allocation to distributors or actual rationing.

Transportation.—Another critical area in the farm production picture is transportation from farm to market. In its advisory and planning capacity, OAWR will work with Department bureaus and such agencies as the Office of Defense Transportation in helping the Farm Transportation Committee carry out farm transportation conservation plans and other work of that nature. The marketing permit system and other phases of local transporta-

tion plans will be emphasized. It may be necessary, too, to increase our co-operation with commercial transportation systems in the year ahead.

Processing and storage.—Most storage problems, particularly those relating directly to farm storage, are being handled by other agencies of the Department. However, present facilities for working with railroads, the grain industry and others will be directed toward the most efficient movement of farm products to market and into commercial storage.

Closely related to the storage problem is the work which the Department is doing with processors who, under wartime restrictions, must increase their operations to process the record output of food and fiber. The Department will intensify the work it started

in 1942 to help commercial processors meet special wartime needs, and to make possible the orderly movement of farm products into processing plants.

Production.—OAWR has had the leadership in pulling together the data needed by the Foods Requirements Committee in sizing up the entire situation as to the amount of food we expect to produce in 1943, planning for the kinds of food we need and in the quantities needed, and how it shall be allocated and distributed to meet civilian, military and lend-lease requirements. It has been the focal point in the Department where the food goals program for 1943 was established up to the point where the program was ready to take to the field.

S. B. BLEDSOE, *Director,*
Office for Agricultural War Relations.

Conservation and Adjustment

AMERICAN farmers are beginning the second year of the toughest war they have ever fought.

They can look back with satisfaction on victory in the 1942 battle of farm production—a victory marked by the reaching of an all-time high in the amount of food and fiber grown.

Most farm production goals have been met or exceeded, and total production for 1942 is up 12 percent over the preceding year. This took careful planning. It took cooperation. The weather helped a great deal. But most of all it took hard uncomplaining work and a willingness to grow what was needed in the proper quantities.

A prime motivating force in rallying America's 6 million farmers to the cry of Food for Freedom was the Agricultural Conservation and Adjustment Administration. Through its four constituent agencies—the Agricultural Adjustment Agency, the Soil

Conservation Service, the Crop Insurance Corporation and the Sugar Agency—production needs and ways to answer those needs were taken directly to the farmer.

County and community committeemen representing the Agricultural Adjustment Agency sat down with the farmer in his home. Together they worked out a plan for his farm in relation to national and state production goals.

These goals had been set up after careful study to determine food requirements for the armed services, lend-lease shipments, and civilians. In many cases they meant a shift to new crops in place of old standbys.

Men who had raised cotton now added peanuts. Fields formerly producing wheat became fields of soybeans, and flax. American farmers had been called upon to replace the vegetable oils once imported from across the oceans, the potential cables and hawsers locked up in Manila fiber sheds by the Japanese, and many another item necessary to the war.

Such a transition from peacetime to

wartime schedules called for new application of the adjustment principles already proving their worth in practical application. With the approach of 1943, farmers are being asked to plan for another season as successful as 1942 despite new limitations on production resources. This will bring increased responsibilities to the farmer and his AAA committee-man.

It will require even more planning than before, and even more cooperation in order to circumvent labor and machinery shortages. The grower, having signed definite commitments to produce for war requirements, will receive his AAA payments upon fulfillment of goals specified in his individual farm plan. The entire 1943 AAA program, with its quotas and allotments and payments and soil practices, will be geared to the single task of meeting all crop and livestock production goals.

Allied with the AAA conservation program is the work of the Soil Conservation Service. The difference between a bumper crop and a short yield often lies in the application of conservation practices which keep land fertile and productive. The health and vigor of the soil are as necessary to the production of Food for Freedom as the products of that land are to the winning of the war.

Triple-A payments are earned by carrying out the most needed conservation practices, which otherwise might not be employed in sufficient quantity on most farms. The Soil Conservation Service provides technical help in developing comprehensive soil programs.

Triple-A and SCS work together to determine which practices need emphasis in relation to the different types of farm land. The SCS is broadening the areas which have the benefit of its counsel considerably beyond the 80,000 farms that have complete conservation systems in operation. The SCS, as well as Triple-A, is placing major emphasis

on simple conservation practices that are easiest to adopt and boost production the fastest.

Keeping the farmer in business is the concern of the Federal Crop Insurance Corporation. By a program comparable to fire insurance on his house, the grower of wheat or cotton is guaranteed some income or "crop" even if a crop fails. Assurance of a safe return on wheat and cotton gives the farmer confidence in trying production of critical war crops.

LOOKING ahead to 1943, it becomes apparent that the extent to which farm production goals are met will determine what food supplies are available to civilian families during the next two years.

Military and lend-lease needs are expected to be nearly twice as great as they were in 1942. This means that they will take about one-fourth of the total food production. It means one-fourth of America's meat production, one-third of the lard, one-third of the billions of eggs laid by hens, and possibly one-half of all canned vegetables.

The demand for critical products may be even greater, and the handicaps to production will certainly increase. Labor and equipment shortages will be more acute than in 1942. The tight transportation situation will be a serious hindrance. Available processing facilities are insufficient to handle some farm products.

Crop acreage for 1943 will be about the same as in 1942, but goals may be larger on some farms.

The American farmer will be asked to do three things next year: (1) To produce as much as possible of the right things in the right amounts; (2) to shift from less needed crops to more essential crops, even if it means a loss of possible profits and harder work; and (3) to produce things that can be stored and conserved.

M. C. TOWNSEND, *Administrator,
Agricultural Conservation and
Adjustment Administration.*

Commodity Credit

COMMODITY Credit Corporation activities in 1942-43 deal with a number of phases of the Food-for-Freedom program. These include loans to farmers on commodities stored on farms and in warehouses, price supports to facilitate increased production of commodities for war needs, and the purchase of foreign agricultural commodities strategically needed in the United States. Besides loans and purchases to protect prices to farmers and preserve price ceilings, the Corporation is facilitating the domestic production of commodities formerly imported or the production of substitute commodities.

Loans to farmers during fiscal 1943 will probably be larger than the 610 million dollars lent in fiscal 1942, the increase to result mainly from an increase to 90 percent of parity in the loan rates on cotton, tobacco, peanuts, and rice. Larger quantities of corn and wheat also may be put under loan in 1943 as a result of the greatly increased production of these crops in 1942. A considerable volume of loans is likely to be made on soybeans this year, in connection with programs to increase the production of vegetable oils to offset a sharp reduction in imports.

Commodity loans outstanding as of September 30, 1942 totaled 475 million dollars, as compared with 438 million dollars on the same date in 1941. Commodities owned by the Corporation totaled 1,301 million dollars as of September 30, 1942, as compared with 823 million dollars on the same date in 1941. The net increase in owned stocks this year over last was principally on account of commodities for lend-lease export through the Agricultural Marketing Administration.

WHEN general price ceilings were announced by the OPA last spring, it became apparent that in

some instances the spread between support prices to farmers and the ceiling prices was too narrow to permit processing the increased supplies of foods needed for military, lend-lease, and civilian use. Subsequently, the President of the United States authorized the Corporation to take financial action in such cases to protect prices to farmers and to preserve the price ceilings. Of immediate concern was a price squeeze which threatened to interfere with the processing of oil crops needed to offset war reductions in imports. Contracts were then made with the processors of vegetable oils, providing a pricing arrangement whereby the amount of the squeeze—one-half cent a pound on crude vegetable oils—is absorbed by the Commodity Credit Corporation.

Similar programs were put into operation in connection with the production of pork by small packers, the marketing of fluid milk in the New York Metropolitan Area and the Duluth-Superior milk marketing area, and the processing of flour and bread. The agreement with small packers provides for the purchase of pork at lend-lease prices and for a "consideration" payment to offset a rise in hog prices above a stated base price of \$13.50 per hundred pounds. In the New York and Duluth-Superior milk deals, the Corporation relieved a price squeeze by purchasing milk from dealers at prices stipulated in marketing orders and then reselling the milk to the dealers at lower prices. As for flour and bread, wheat under loan is to be released to farmers at less than the loan rate for sale in the open market.

THE Corporation's activities designed to facilitate the domestic production of commodities formerly imported, or the production of substitute commodities include the purchase and distribution of hempseed for the production of 300,000 acres of hemp in 1943; of castor-beans for the increased production of beans in 1943; of cotton bagging to offset a

reduction in imports of jute, of soybeans, peanuts, cottonseed, and flaxseed to replace imports of vegetable oils cut off by the war, and of fiber flax to facilitate expansion of this industry in the Pacific Northwest.

Other activities include the acquisition of naval stores for stockpile accumulation; the purchase and sale of Alaska spruce for use by the aviation industry; of American-Egyptian cotton for use in the manufacture of aviation fabrics; of steel and prefabricated wood bins for the storage of grain; of pyrethrum seed to stimulate domestic production, of sorgho for use in the manufacture of industrial alcohol, and the purchase and rental of peanut harvesting equipment and storage warehouses. Large quantities of Government-owned stocks of wheat and corn also have been sold to livestock feeders, and to distillers for the production of industrial alcohol.

THE Corporation is engaged in extensive foreign purchase activities to obtain commodities strategically

needed by the United States, and to help relieve the economic distress of Latin American countries whose usual export markets have been cut off by the war. Commitments include the purchase of surplus stocks of cotton in Haiti, Peru, and Nicaragua; castorbeans, babassu kernels, coffee and cocoa from Brazil; rotenone from Brazil and Peru, and flax fiber from Peru.

Through September 15 more than 250,000 tons of 20 different oils and oil-bearing materials had been purchased from countries friendly to the United States; subsequently, the Corporation appointed an Emergency Group of importers as agent for the Corporation to handle imports of fats, oils, and oil-bearing materials. Foreign purchases are being made under authority of the Board of Economic Warfare designating the Corporation as the public agency for the importation of most agricultural commodities.

J. B. HUTSON, *President,*
Commodity Credit Corporation.

Farm Credit

CREDIT units under the supervision of the Farm Credit Administration have the job of providing farmers who have a sound basis for credit with the funds to finance their farms and current production. With increased production of foods, fibers, and vegetable oils so essential for war, their effectiveness in providing the right kind of credit is even more important than it was in peacetime.

Farmers often find that their expenditures are at least temporarily greater when they increase production or shift from one type of crop or livestock to another. During the past two years this tendency has resulted in farmers borrowing somewhat larger amounts from their 530 local Production Credit Associations. Fortunately, this has been offset to some extent by

the fact that a relatively large number of farmers have accumulated enough capital that they no longer need to borrow money for operating purposes. In other cases income has increased to the extent that, although larger loans are necessary, they may be paid more rapidly. And since the interest on Production Credit Association loans is always charged only for the exact number of days each dollar is used, this helps to reduce the cost of credit to the farmer. Thus, the wartime job of the cooperatively operated Production Credit Associations has been and will continue to be largely one of financing production of "Food for Freedom."

THE National Farm Loan Associations and the Federal land banks are, of course, financing the purchase of some farms by tenants either through loans in connection with the sale of

farms land banks have owned or through loans to purchase other farms. During the past year many farmers have made rapid progress toward their goal of a debt-free farm. This is one of the aims of the long-term mortgage credit system.

The land banks' provision for allowing payments to be made on the principal of loans ahead of schedule has proven exceedingly helpful. In the first nine months of 1942, farmers repaid a total of \$197,000,000 on the principal portion of their land bank and Land Bank Commissioner loans. This included loans that were paid off in full before maturity.

In addition the Federal land banks and the National Farm Loan Associations have urged farmers to set aside a reserve for possible future "rainy days." This encouragement has taken two forms. One has been the Future Payment Fund into which farmers may place money with which to pay installments in poor years that may lie ahead. On money in this fund, farmers receive interest at a rate equal to that which they pay on their loans. Farmers have laid aside \$15,000,000 in this Fund. The other has been the pointing out to farmers the wisdom of setting up additional reserves in the form of War Bonds and Stamps.

NATIONAL Farm Loan Associations and Production Credit Associations expect to perform approximately the same services to farmers in 1943 as they have in 1942. However, they recognize that new problems in connection with production will undoubtedly make it necessary for farmers to change their financial plans. Nine years' experience in the operations of the Production Credit associations is making it possible to cut many corners that will save farmers time and wear on tires. For example, much more of their business will be carried on by mail and they will make greater use of branch offices and local representatives to bring their services closer to their members.

THE increased production of food and other critical war materials has resulted in many changes among cooperative associations. With the greater demand for concentrated products to save shipping space, many cooperatives have shifted the type of product which they process and sell. Many cooperatives also have been faced with the problem of consolidating truck routes and looking ahead to avoid bottlenecks in transportation. Then, too, a large number of cooperatives have to find new types of containers which can be made of non-critical materials.

Many of these changes have, of course, necessitated an additional capital investment and the increased quantity of products handled has increased the need for operating funds. As a result the 1,700 cooperative associations borrowing from the 13 Banks for Cooperatives have obtained credit totaling \$261,000,000 in the year ending September 1942, compared with \$185,000,000 in the same period a year earlier. Although the rate of increase has leveled off, the same trend is expected to extend through 1943.

THE Farm Credit Administration will continue to be extremely interested in measures to prevent a farm land boom. It assisted in the formation of the National Agricultural Credit Committee on which farm organizations and representatives of other lenders, including large insurance companies, banking organizations and Government agencies, are represented. This committee meets periodically to review the current farm real estate situation and exchange information and views on methods of preventing a land boom which can only result in disaster for both farmers and lenders. At its last meeting in September after reviewing the current picture the committee felt that, although many factors which caused the land boom during and following the first World War are present, many other factors tend to

prevent such a catastrophe. These include shortages of labor and machinery, Government price ceilings, a fairly large supply of farms in the hands of unwilling owners, and the tendency for

creditors and farmers both to be more cautious because of the memory of their past experiences.

A. G. BLACK, *Governor,
Farm Credit Administration.*

Farm Security

CAN American agriculture produce all the food and fiber we must have to see us through to a decisive victory over Germany and Japan? It can—if full use is made of our farm lands and our farm manpower.

Not all of the Nation's farms are operating at full capacity. Many farmers are faced with difficulties which keep their production below par. On large farms, the shortage of skilled workers is the most serious threat to capacity production. On small farms, it is lack of sufficient productive resources.

About half the Nation's 6 million farm operators produce the bulk of all commercial crops. Their farms, for the most part, have the best soil and are large enough to comprise economic units.

They are now operating at a high level of productiveness, and if they can get the labor they need, they probably can maintain their record-making production and supply the greatest part of our needed food and fiber. Right now, though, they are facing a labor shortage which holds a serious threat for 1943 production goals.

There are 2,900,000 farm families who have incomes of less than \$900 a year. Of these, 1,600,000 derive all or most of their income from farming and most of these families are underemployed. In some cases their soil is too poor for efficient production, or their tracts are too small to require all the available family labor. Many lack knowledge and skills necessary to make the best use of their land and their labor, or the working capital to finance an adequate farming plan. The man-hours of labor that are being wasted

every day on such farms would produce an estimated 250 million pounds of pork, or 33 million gallons of milk, or 2½ million dozen eggs. To reach 1943 production goals we must make full use of this great reserve of manpower.

THE ARMED forces and war industries undoubtedly will draw heavily on farm manpower not now fully employed. The problem of agriculture is to help those who remain in farming increase effective manpower on the Nation's Food for Freedom firing line. To do this job, three courses of action are necessary:

1. *The small farmer who can make his greatest contribution where he is must be provided with the credit, advice, supervision, and other aids he needs to make the best possible use of his land and his labor.*

Long before Pearl Harbor, Farm Security was emphasizing the need for increased food production among its borrowers. When the United States entered the war, the agency redoubled its efforts to help the half million farm families on its program to step up production. FSA aid will reach as many other small farmers this year as funds will permit.

Rehabilitation loans are for farmers who do not have the security to qualify for loans from any other source. The loans enable them to buy livestock, machinery, and other equipment they need to become better producers. An education program, with the farm as the classroom, goes along with the loans. County farm and home supervisors visit the borrowers regularly to help them improve their skills.

That small farmers, if given this assistance, can increase production is shown by what FSA borrowers have

accomplished. By the end of 1941 those who had been on the program for more than a year had doubled food production for home use. Last winter FSA county supervisors asked borrower-families what food and fiber increases they thought they could make toward the war goals in 1942. They responded immediately by planning two to five times the percentage increases in production, called for by the national goals.

Preliminary reports from county supervisors indicate that borrower-families are not only living up to their pledges, but in many cases are surpassing them.

Machinery and purebred sire service co-ops, purchasing and marketing associations, group medical and dental care, debt adjustment, war leases, and farm ownership loans are other FSA services which are enabling small farmers to become effective producers.

2. Small farmers who can best serve by changing their locations to serve as operators of better farms or as workers must be given training in the work they are to do and transported to the place where they are needed.

Undoubtedly there will be a great increase in the need for competent operators and workers to replace farmers who are drawn into the armed

forces, war industries, and related activities. Underemployed farmers in poor land areas as well as some FSA borrowers who have had the benefit of farm management training and supervision but could obtain maximum production on larger units, will be available to meet this need. The tract vacated by a small farmer can be kept in production by small farmers remaining in that neighborhood. FSA has started an experimental program of this sort.

3. Farm workers needed for seasonal labor must be transported from labor-surplus to labor-deficit areas.

Farm Security now operates 95 migratory labor camps in specialty crop areas. These camps provide housing, health and sanitary facilities for thousands of migratory workers whose labor is now so vitally important in the harvesting of war crops. In addition, this year Farm Security cooperated with other agencies in a program of recruiting and transporting seasonal farm workers. During the 1942 season approximately 9,000 workers were moved into strategic harvest areas, and this program if continued holds possibilities for supplying workers on a much larger scale next year.

C. B. BALDWIN, Administrator,
Farm Security Administration.

Extension Service

AS United States farmers look ahead to the big job that is theirs in 1943, they face two obvious facts:

(1) The need for food and fiber is much greater than it was in the first World War, greater than it was a year ago.

(2) Farmers have less in the way of skilled labor and new equipment with which to grow the 1943 crop.

These two facts, plus the need for large-scale diversion of our food to military and lease-lend needs and natural limitations in crop-acres, will bring a change in the menus of many American families. The fortunes of

war, like the vagaries of the weather' will naturally determine to what degree we shall have to tighten our belts. However, Americans need have no fear of food shortages such as those already being experienced in most of the Axis-occupied countries—not if they adjust their diets along the lines of the war-time food-sharing programs being proposed in the interest of equitable distribution.

The relative food security which we are enjoying in this country is the direct result of the patience and energy put into scientific agricultural research for generations, and of our learning how to harness science to the land of the individual farmer.

WINNING the battle of agricultural production in 1943 will depend to an even greater degree on the adoption of efficient methods. Changes will come on every farm. One farmer may have too many milk cows; another may have too few. Some farmers may be able to increase poultry or hog production by renovating more old buildings before next spring. Others may be able to make an old tractor as good as new through a few simple farm-forged gadgets. All such changes will be examples of ingenuity and resourcefulness in practical farm science.

To whom can the average farmer turn when he needs technical help? When insects or other plant pests threaten disaster to his crops? When unexpected weather can mean spoilage of tons of food needed for victory? When he is up against a marketing problem that calls for cooperative planning of grading, shipping, and the like?

Farmers do not always have the time to figure out the best and surest methods to meet an emergency. But they know that there is a county Extension agent who probably knows a practical solution, or at least can get in touch with people who have the answer.

IN a memorandum dated February 11, Secretary Wickard outlined a long list of wartime responsibilities which became the over-all working blueprint of extension work for the duration. Among these responsibilities he listed educational leadership, which the Extension Service is carrying out in a number of ways—by sponsoring group and general educational meetings, demonstrating new production methods, and contacting individual farm families through neighborhood leaders.

At the State agricultural college, where each State Extension Service has its headquarters, a staff of subject-matter specialists keeps abreast of the scientific and technical knowledge of

the college, the State agricultural experiment station, and the Department of Agriculture. Thus the county agricultural and home demonstration agents maintain constant touch with the latest developments in agricultural science and practice. Whether it is to recondition farm machinery, feed more hogs, grow more feed, or do one of a hundred other things that will increase production, the facts can be had from the Extension Service.

WARTIME extension work in 1943 will cover five broad fields.

The first: To help farmers step up efficiency in food production, with stress on meeting the food goals established by the Department of Agriculture. Extension work will emphasize efficient use of land, labor, material, equipment, time, and money. Even the efficient farm manager of the past will have many new methods to learn.

The second: To stimulate, to an even greater degree than in 1942, home production and conservation by farm families of their own food supplies in keeping with nutritional needs.

The third: To help farmers organize their farm activities to meet wartime shortages, and to cooperate in special wartime activities essential for victory. A phase of this program is the Nationwide farm machinery repair education which is now under way. Similar programs will be necessary to help farmers overcome shortages of fertilizers, building materials, certain types of feed in some areas, and other supplies. Conservation of all essential material and equipment will be stressed.

The fourth: To encourage young people to enlist in agricultural work that will help speed victory. In the past year, remarkable achievements have been made in a seven-point 4-H victory program. Similar plans are under way for 1943. Encouragement will also be given to city youth to enlist for farm work during the summer.

The fifth: To help rural people maintain physical health, adequate nutrition, and an interest in education; to encourage decent living standards; and to develop the ability to meet post-war situations with intelligence and courage.

Agricultural Marketing

IN recent months the Agricultural Marketing Administration has been buying up food at the rate of 5 million dollars' worth a day. The bulk has been for shipment to the United Nations, under the lend-lease program. Some has been for use on the home front through the school lunch, school milk, and direct distribution programs.

That buying means food for the defenders of England, Russia, China, for those manning our own outposts of Puerto Rico and Hawaii, and for youngsters in the school rooms of America.

It also means increased farm production—more eggs, milk, meat, fruits, and vegetables, and many other crops—stimulated by the opening up of a new market and by the stabilization of market conditions. The AMA has attempted so far as possible to time its purchases to make for an orderly movement of goods over the transportation system, and for an orderly flow of commodities through the various marketing channels. It will continue to do so in 1943.

Future purchases will be governed by the needs of our armed forces and our allies and by the domestic supply situation. The armed forces of our own country and of our allies deserve first priority on foods, however, and they are going to get it.

THE armed forces need foods that can be shipped in the minimum amount of space and with the least risk of spoilage. The same require-

IN brief, the Extension Service is equipped to help farmers singly or in groups with the practical and technical information that will help them do their part in winning the war.

M. L. WILSON,
Director of Extension Work.

ments hold for lend-lease foods. On the basis of these requirements, the Government buying program has led to a tremendous expansion of the dehydration industry. Shipment of dehydrated foods next year will save the cargo space of several hundred ships. Tentative plans for 1943 call for a dehydrating capacity of more than 100 million pounds of vegetables, 350 million pounds of eggs, more than 600 million pounds of edible dried milk, and 60 million pounds of pork. This new market will compensate for the reduction in sales to canneries made necessary by the tin shortage.

AMA buying of some commodities such as dairy products, canned vegetables, and dry beans has been the chief factor in the determination of market price. In the case of most major commodities, moreover, the effect of the Government purchase program has been felt.

It is impossible to spell out the requirements under the lend-lease program in 1943, but we do know that they will be tremendous. From March 15, 1941, when lend-lease operations began, to November 1, 1942, requisitions from the United Nations totaled more than \$2,000,000,000. And under the territorial emergency programs, large quantities of food have been purchased for shipment to Hawaii, Puerto Rico, and other island outposts. These programs are expanding and will continue to do so in 1943.

FOOD is essential to the whole war effort on the home front as well as on the military. Some groups need help if they are to get enough of the right things to eat. School

children are particularly in need of the right kind of food. AMA cooperation is making possible school lunch programs in thousands of communities. More than 6 million school children are being fed the various basic commodities provided free by the Federal Government. In addition, certain basic foods are being furnished to State Welfare Departments for distribution to families on relief.

The school lunch program and the direct distribution program tie in directly with production and lend-lease operations. Frequently, foods purchased for lend-lease shipment cannot be moved for one reason or another. The school lunch and direct distribution programs furnish outlets for the effective utilization of such food. Likewise, when seasonal or regional overabundances develop, the existence of outlets helps to prevent waste and assure the harvest of all food produced.

The school milk program, by providing low-cost milk to school children, is helping to build up national health and physical fitness.

The food stamp program now aids in supplying essential foods to families on relief, unemployable persons, mothers with dependent children, aged persons on pensions, and other recipients of public assistance who have very low incomes. This is done by giving them supplemental purchasing power for food commodities. Looking ahead it is possible to use the program, too, as a means of enabling low-income groups to buy foods up to the amount of their ration.

PART of the job of the AMA is to help direct the flow of traffic and to keep things orderly through its market service and regulatory work. These services are designed to keep the traffic moving, and to keep the marketing system operating at the high peak of efficiency that the war effort makes necessary. Some of them had their origin in World War I. They will be continued in 1943, with some changes

which will enable them to contribute as much as possible to wartime production and distribution.

The Nation-wide market news service, which provides buyers and sellers throughout the country with information on supply and demand, price and movement, of more than 100 major farm commodities was started a quarter of a century ago as a war necessity. Considerably expanded, it is today an integral part of our marketing system.

The large purchases by the Government have been made on the basis of Federal grades and standards. This has greatly increased the importance of the inspection, grading and standardization work. The volume of farm products sold on the basis of Federal grades in 1942 was the greatest in history and may be even greater in 1943. Grades provide a common language of quality for buyers and sellers. Not only do they make for more efficient marketing, but they are essential in price control operations.

With shortages of tires and gasoline, increased help must be given next year in solving various transportation problems, ranging from rate adjustments to warehousing and storage. As more and more farm commodities will depend on public carrier conveyance, this work will grow in importance.

FOCUSING consumer attention on the commodities that are in seasonal supply or relative abundance to prevent waste and to conserve less abundant foods is another part of the AMA's task.

One way of doing this is through the victory food special program. Foods are designated as "Victory Food Specials" when they are good buys from the standpoint of the national food supplies. In cooperation with the trade, extensive merchandising campaigns are conducted to focus consumer attention on the specials. Victory food specials on fresh fruits and vegetables have helped take the pressure off canned goods which can then be stored for use in the out-of-season

period. The victory food special on cheese helped ease the pressure on meat supplies which were short at the time. This program will be continued as an instrument for managing the Nation's food supply. It may be utilized in 1943 to help in the marketing of those fresh foods formerly packed in cans for which tin is no longer available.

Because the protection of buyers and sellers from unfair and harmful practices is essential now as never before, the AMA will continue to administer the Perishable Agricultural Commodities Act, the Commodities Exchange

Act, the Marketing Agreements Act, the Packers and Stockyards Act, and the several other statutes under its jurisdiction.

War will necessitate further changes from time to time in the field of marketing. New situations will require different approaches, different methods of action. Close cooperation among Federal, State, and private marketing agencies and institutions will be needed as never before.

ROY F. HENDRICKSON,
*Administrator,
Agricultural Marketing Administration.*

Agricultural Research

WHEN the Secretary reorganized the Department of Agriculture in December 1941, he brought many phases of research work together into one unit, the Agricultural Research Administration, with the object of achieving greater efficiency and concentration of effort.

A glance at the titles of the agencies in the ARA shows the scope of its work: Agricultural Chemistry and Engineering, Animal Industry, Dairy Industry, Entomology and Plant Quarantine, Home Economics, Plant Industry, the four Regional Research Laboratories, the nine laboratories set up under the Bankhead-Jones Special Research Fund, the Beltsville Research Center, and the Office of Experiment Stations, through which close working arrangements are maintained with agricultural research agencies in the States and territories.

Certain regulatory activities, for example those involved in quarantines against insects and animal and plant diseases, are included. These activities are a direct outcome of advances in scientific knowledge, upon which they depend for continued effectiveness.

To facilitate administration and coordination, a central office has been organized, consisting to date of the Research Administrator, E. C. Auchter; the Assistant Administrator, P. V. Cardon; five coordinators who work closely together though specializing in different fields—S. B. Fracker, Gove Hambidge, Henry W. Marston, O. E. May, R. Y. Winters; an Assistant to the Administrator, C. E. Schoenhals; a budget officer, H. K. Smoot.

THE bureaus in the ARA have a rather long history, dating back to the early days of the Department, which for decades was largely an organization of scientists. Each of these bureaus has a record of notable work in its field—work that in many cases has helped to shape the course not only of agriculture but also of general scientific developments. The identity of the bureaus has been maintained, but their unified organization gives each greater effectiveness.

Brought to a head by the war, the reorganization is a move toward what many forward-looking scientists have long deemed necessary—the pulling together of a wide range of specialists for concerted drives on problems that cannot otherwise be met quickly or adequately.

Chemistry, physics, bacteriology, plant and animal physiology, plant and animal pathology, genetics, nutrition, entomology, soil science, engineering, agronomy—these are some of the broad fields, in turn including a multitude of subdivisions, that are represented in the work of the Agricultural Research Administration.

THE immediate purpose is to concentrate these resources on the problems posed by war. Of the immense number of projects now under way in the laboratories, pilot plants, test plots, greenhouses, and field stations of the Administration, many were started at the request of military or other war agencies; others are concerned with aspects of previous work to which the war has given new urgency.

Scientific research does not proceed by fits and starts, nor is there any royal road to results, which depend on the orderly, continuous accumulation of facts and the discovery of relationships between them. In a crisis, this accumulated knowledge, together with the technical skill by which it is developed, becomes a war chest of great value. Properly mobilized, it can be turned to the solution of emergency problems as fast as is permitted by scientific techniques.

The following eight examples of emergency work by ARA agencies illustrate the practical results that have been achieved in a comparatively short time:

●War made the dehydration of foods imperative; it was quickly made practical through a concerted attack on the problem by scientists in many different fields. It has been said that the new dehydration industry has achieved in 1 year what would probably have taken 10 under ordinary conditions.

●Starting from scratch, the development of 2,3 butylene glycol from grain

as a source of butadiene was in the pilot-plant stage in less than 2 years.

●So was Norepol, derived from vegetable oils.

●By mobilizing their accumulated knowledge in related fields, entomologists were able in a matter of weeks to develop new methods of controlling lice, curse of armies and carriers of typhus. These methods are wholly different from the slow, cumbersome procedures hitherto used.

●Similarly, a new method was applied for the control of mosquitoes, carriers of malaria.

●Previous experimental work made possible a rapid increase in seed stocks of belladonna and carefully controlled planting by growers, so that this country's needs for the drug will be met in spite of the cutting off of imports.

●In one year, hemp seed stocks were increased enough to permit a huge expansion in the acreage of this important wartime fiber crop.

●Large-scale application of a new method for the control of brucellosis of cattle in the United States came just in time to be of great service in the British Isles, where its use is expected to curb the heavy losses from this disease, thus resulting in increased milk production.

Many more examples of war jobs might be given, but these are enough to indicate the nature of much of the present work in ARA.

PROCESSES and products developed for war needs will of course, in many cases, be useful long after the war is over.

Even more significant, however, is the hard-driving, coordinated approach to scientific and technological problems developed by the war. Applied to peacetime problems, that approach can do much to further the building of a better world.

E. C. AUCHTER, *Administrator.*
Agricultural Research Administration.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935- 39= 100) ¹	Income of in- dustrial workers (1935- 39= 100) ²	Cost of living (1935- 39= 100) ³	1910-14=100					Farm wage rates
				Whole- sale prices of all com- modities ⁴	Prices paid by farmers for commodities used in—			Prices paid, interest, and taxes	
					Living	Production	Living and pro- duction		
1925	90	126	125	151	163	147	156	170	176
1926	96	131	126	146	162	146	155	168	179
1927	95	128	124	139	160	144	153	166	179
1928	99	127	123	141	160	148	155	168	179
1929	110	134	122	139	159	147	154	167	180
1930	91	110	119	126	150	141	146	160	167
1931	75	85	100	107	128	123	126	140	130
1932	58	59	98	95	108	109	108	122	96
1933	69	61	92	96	108	108	108	118	85
1934	75	76	96	109	122	123	122	128	95
1935	87	87	98	117	124	127	125	130	103
1936	103	100	99	118	123	125	124	128	111
1937	113	117	103	129	128	136	131	134	126
1938	89	91	101	115	122	125	123	127	125
1939	108	105	99	113	120	122	121	125	123
1940	123	119	100	115	121	124	122	126	126
1941	156	163	105	127	131	131	131	134	154
1941—November	* 167	180	110	135	142	139	141	143	---
December	* 168	187	110	137	143	141	142	143	---
1942—January	* 172	196	112	140	146	145	146	146	166
February	172	194	113	141	147	147	147	147	---
March	172	194	114	142	150	149	150	150	167
April	* 174	* 203	115	144	152	149	151	151	177
May	* 175	* 209	116	144	153	150	152	152	---
June	176	* 216	116	144	154	150	152	152	183
July	179	* 229	117	144	154	150	152	152	202
August	183	233	118	145	155	150	* 153	152	---
September	185	236	118	145	157	151	154	153	---
October	188	240	119	146	158	151	155	154	220
November					159	151	156	155	---

Year and month	Index of prices received by farmers (August 1909-July 1941=100)								Ratio, prices received to prices paid, interest, and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Ment animals ¹	Dairy products	Chick-ens and eggs	All groups	
1925	157	177	172	153	141	153	163	156	92
1926	131	122	138	143	147	152	159	145	86
1927	128	128	144	121	149	155	144	139	84
1928	130	152	176	159	151	158	153	149	89
1929	120	144	141	149	156	157	162	146	87
1930	100	102	162	140	134	137	129	120	79
1931	63	63	98	117	92	108	100	87	62
1932	44	47	82	102	63	83	82	65	53
1933	62	64	74	105	60	82	75	70	59
1934	93	99	100	103	68	95	89	90	70
1935	103	101	91	125	117	108	117	108	83
1936	108	100	100	111	119	119	115	114	89
1937	126	95	122	123	132	124	111	121	90
1938	74	70	73	101	114	109	108	95	75
1939	72	73	77	105	110	104	94	92	74
1940	85	81	79	114	108	113	96	96	78
1941	96	113	92	144	144	131	122	122	91
1941—November	103	136	98	158	149	148	157	135	94
December	112	138	98	162	157	148	153	143	100
1942—January	119	143	102	204	164	148	147	149	102
February	121	150	98	161	173	147	135	145	99
March	122	151	111	136	180	144	130	146	97
April	120	158	118	158	190	142	131	150	99
May	120	159	131	152	189	143	134	152	100
June	116	153	148	169	191	141	137	151	99
July	115	155	131	200	193	144	145	154	101
August	115	151	126	256	200	151	166	163	107
September	119	156	129	191	195	156	166	168	107
October	117	158	124	226	200	165	173	169	110
November	117	160	127	238	197	171	178	169	109

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised November 1941. ³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1928=100, divided by its 1910-14 average of 65.5. ⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

FOOD GOALS FOR 1943

THE

AGRICULTURAL

SITUATION

JANUARY 1943

A Brief Summary of Economic Conditions

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KEYNOTING 1943 food production goals, Secretary Wickard said: "I want to express my admiration of the wonderful production record which farmers made. * * * In the face of growing difficulties they smashed all previous records for total farm production, and they smashed them by a wide margin. * * * But today 1942 is behind us. We are looking ahead to 1943. * * * We must feed our growing Army and Navy. They, with our allies, are going on the offensive now, and that calls for extra food and larger reserves. * * * The needs keep growing. * * * In the pinch of war we can't turn out enough of everything. Asking agriculture to go ahead and increase all production would be like asking industry to increase production of everything it wanted to make. We know what that would mean. * * * Last year we went a long way in converting agriculture to a war basis. This year we are completing that conversion. Every acre of land, every hour of labor, every ton of fertilizer and every piece of equipment must be used to turn out the products we must have. Agriculture is mobilizing 100 percent for war next year. We are in it not up to our knees or our waists, but up to our chins."

Summary of the Goals

MEAT Goals call for production of 25.7 billion pounds of beef, veal, pork, lamb and mutton in 1943; about 4 billion more than in 1942, and 50 percent above the 1936-40 average. Growing lend-lease and military needs will absorb the increased production and about one-fourth of the total output. Supplies for civilians will be much less than they would like to buy at ceiling prices. An order issued in December restricts distribution of commercial meat supplies (excluding farm and local retail slaughter) for civilian use in the first quarter of 1943 to 70 percent of the beef, veal and pork and 75 percent of the lamb and mutton distributed in the first quarter of 1941.

Hog goals are a 15-percent increase over 1942 in the combined spring and fall pig crops, with a 10-pound increase in average weight of hogs marketed. The 1943 pig crop should total about 120 million head, compared with 104.7 million raised in 1942. Requested slaughter of 100 million hogs in calendar year 1943 would result in production of 13.8 billion pounds of pork. Breeding intentions reported in December point to a 24-percent increase in the number of sows to farrow in the 1943 spring season. Assuming a normal number of pigs saved per litter this indicates a spring crop of about 75 million pigs—5 million more than the minimum goal. Hog prices will be supported through September 1944 at not less than 90 percent of parity and not less than \$13.25 per hundredweight average at Chicago for good to choice butcher hogs weighing 240 to 270 pounds. The average price received by farmers for hogs December 15 was 118 percent of parity.

Goals of 9,780 million pounds of beef and 1,130 million pounds of veal, totaling 9 percent more than the record 1942 output, will require slaughter of 80.4

million head of cattle and calves in 1943, compared with slightly less than 28 million in 1942.

Carcass beef and primary wholesale cuts at the slaughterhouse and wholesale levels were put under specific dollars-and-cents ceiling prices in December. Regional differentials were set, based on transportation costs between surplus and deficit areas. The new ceilings are designed to reflect market prices for live cattle slightly higher than prevailed in September 1942.

Lamb and mutton goals are an output of 990 million pounds, requiring slaughter of 24.1 million head of sheep and lambs. Slaughter of sheep and lambs has been unusually large during the past year, and sheep numbers January 1, 1943, probably were somewhat fewer than a year earlier.

FATS AND OILS Requirements for fats and oils in 1943 under the manufacturers' limitation are estimated at 12 billion pounds, including 9.2 billion for civilians and 2.8 billion for military use and export.

Increased lard output will help meet these record needs. Lard output may total more than 3 billion pounds in 1943 compared with 2.5 billion in 1942.

The soybean goal of 10.5 million acres harvested for beans will produce 189 million bushels of beans at normal yields of 18 bushels per harvested acre. After taking out seed and feed, 163 million bushels may be left for crushing to produce around 1,440 million pounds of oil. The goal acreage is slightly below that harvested in 1942, because of limited crushing facilities in the principal producing areas, difficulties in transportation and storage of the beans and oil, and the need for increased corn acreage. Some further increase in soybean acreage is sought in the Southern States, wherever yields are satisfactory, inasmuch as adequate

crushing facilities are available in the South. The Department of Agriculture will support prices of soybeans for oil at 90 percent of the price comparable to parity and at not less than \$1.60 to \$1.75 per bushel, U. S. average farm price, for Yellow and Green beans of high oil content.

Goal for peanuts is 5.5 million acres, 49 percent above the 3,690,000 acres picked and threshed in 1942. With normal yields of 675 pounds per harvested acre, production would total about 3,712 million pounds. At least 1,450 million will be needed for edible trade, seed and local uses, leaving perhaps 2,200 million pounds for crushing. Some substitution of peanuts for other crops, especially short-staple cotton, will be necessary. Much of the increase will need to come from newer areas, especially Oklahoma and Texas. A single price program has been recommended, which would require new legislation. It would assure growers an average return of 80 to 85 percent of parity for peanuts, whether for edible use or oil. As of December 15, parity for peanuts was \$148.80 per ton. If a single-price program is impossible, support programs similar to those of 1942 will be continued.

Flaxseed goal is 5 million acres, 7 percent more than the 4,691,000 acres planted in 1942. With normal yields of $7\frac{1}{4}$ bushels an acre, 1943 production would be about 36,250,000 bushels. In addition, probably 7 million bushels can be imported from Canada and 5 or 6 million could be withdrawn from stocks built up by the record crop of 40,660,000 bushels in 1942. Under WPB allocations, maximum requirements for linseed oil in 1943 will be about 800 million pounds, the product of about 42 million bushels of flaxseed. Prices of flaxseed for oil will be supported through June 30, 1944, at not less than 90 percent of parity, and at least \$2.70 per bushel, basis No. 1 flaxseed at Minneapolis.

MILK Goal for milk production in 1943 is 122 billion pounds,

which is 2 percent higher than actual production in 1942. Total demand for dairy products may equal 140 billion pounds of milk, but the goal is about as much as farmers can hope to reach. Scarcity of labor in some areas has led to sale of cows for slaughter at a rate somewhat above other recent years. However, the number slaughtered—in relation to the number on farms—is less than in 1934-36, and new programs to keep essential workers on farms should check this trend. Based on reported slaughter and reported number of 2-year old heifers, the number of cows on farms is believed to be 2 percent greater than a year ago. In many areas, average production per cow could be increased through better feeding, with but little extra labor. The Department of Agriculture will support prices of dairy products through June 30, 1944 at not less than 90 percent of the parity equivalent or at least 46 cents a pound for 92-score butter, Chicago basis; 27 cents a pound including subsidy for American cheese, Plymouth basis; 12.5 cents for roller and 14.5 cents for spray process dry skim milk, extra grade Midwest basis; and a comparable price for evaporated milk, f. o. b. plant basis, to be announced.

EGGS AND POULTRY

Rapid increase in protein food production is the objective of the egg goal, 4,780 million dozen, which is 8 percent above egg production in 1942. The goal for chickens for meat is 4 billion pounds, which is 28 percent above 1942. A 9-percent increase in number of laying hens will require greater care of laying flocks to maintain a high rate of lay and unusual attention to egg collection and marketing. Heavier military and lend-lease demands for dried eggs, will leave fewer eggs for consumers than they would like to buy. Goals for dressed chicken can be attained through a 10-percent increase in the number of chickens raised for farm flock replacement, production of 100 to 125 million

young chickens for meat in general farming areas out of the usual season, an increase of 75 million birds in commercial broiler production to be sold at weights averaging not less than 3 pounds. Production of heavier birds by enterprises formerly producing broilers would increase total output materially.

The goal for turkeys is 560 million pounds, compared to 485 million in 1942. Farmers will need to take good care of turkey hens for egg production if the necessary poults are to be obtained.

The Department of Agriculture will support, through June 30, 1944, prices of eggs, chickens (except broilers and chickens weighing less than 3 pounds liveweight) and turkeys, at not less than 90 percent of parity. Egg prices will be supported at the equivalent of at least 30 cents a dozen in spring and early summer and an annual average price of 34 cents a dozen, U. S. average farm price, with differentials for season and location.

FEED GRAINS AND HAY To meet expanding needs for livestock in 1943 and beyond, farmers will need to follow up record 1942 production of feed grain, oil meal and cake, and hay with further increases in feed crop acreage. Since corn is the principal feed grain, farmers in the commercial area are permitted to overplant their corn allotments without penalty, if they have planted their goals of war crops. In order to further stimulate production of corn in the non-commercial corn areas, 1943 loans will be available at the full rate in all parts of the country wherever storage is feasible. To encourage barley production, the Department of Agriculture will support the price of barley from the 1943 crop at a level equal to its feeding value in relation to corn. The 1943 goal calls for nearly a quarter million acres more grain sorghums.

The need for increased acreage of corn and a large acreage of vital oil

crops are primary factors behind the suggested decrease in acreage of oats. The goal for oats is still high enough to permit necessary seedings as nurse crops, with grasses and legumes. The goal for all hay is 1.6 million acres less than the area harvested in 1942, in view of the substantial carryover of tame hay. Insofar as its resources will permit, the Department of Agriculture will endeavor to maintain feed prices in 1943—especially for corn, feed wheat, and oil meal, at about the same levels as in 1942. Loans will be made on grain sorghums at rates slightly higher than in 1942. Maintenance of livestock-feed price ratios favorable to continued heavy feeding are of course essential to reach the food goals.

WHEAT Suggested acreage of wheat planted for harvest in 1943 is 52.5 million acres. At normal yields of 12.4 bushels an acre, this would produce 651 million bushels. Carryover from the 1942 crop will be about 800 million bushels. The resulting supply would meet all expected needs including an adequate carryover, plus an additional 250 million bushels for feed, industrial uses, or shipment to our allies. Wheat allotments total 55 million acres, the least permitted by law. The 1943 goal is virtually the same as the acreage planted for harvesting in 1942, which was 52,533,000 acres. Seedings of winter wheat in the fall of 1942 were down 2 percent from 1941.

RYE Goal of 3,600,000 acres for harvest in 1943 is 6 percent below acreage harvested in 1942. At normal yields, this would produce 40 million bushels as compared with 57.3 million produced in 1942. Estimated 50 million bushel carryover next July 1 will provide ample supplies. If 35 million bushels are fed, total use would be about 54 million bushels, leaving nearly 50 million carryover July 1, 1944. Seedings in the fall of 1942 including rye for pasture and cover crop as well

as grain, were 8 percent less than in 1941.

DRY BEANS Goal for 1943 production of dry edible beans is 25,542,000 bags (uncleaned basis). Farmers will have to plant 3,300,000 acres to meet the goal, assuming that yields will be normal. Plantings were 2,135,000 acres in 1942 and 2,255,000 in 1941. Production in 1942 was 19,608,000 bags. Comparatively easy to store and transport, dry beans are a good source of protein and energy. Prices of the 1943 crop of dry beans will be supported through June 30, 1944, at not less than 90 percent of parity, calculated at the beginning of the marketing year, for the following varietal types: Pea, Medium White, Great Northern, Small White, Flat Small White, Pink, Pinto, Cranberry, Light Red Kidney, Dark Red Kidney, and Western Red Kidney. Supports will be at least \$5.60 per 100 pounds for U. S. No. 1 beans and \$5.45 per 100 pounds for U. S. No. 2 beans, in bags f. o. b. cars at country shipping points.

DRY PEAS The goal for dry peas is 6,078,000 bags, uncleaned, which would require planting of about 665,000 acres. The 1943 crop of Alaska, Bluebell, Scotch Green, First and Best, and White Canada will be supported through June 30, 1944, at not less than 90 percent of parity or at least \$5.25 per 100 pounds for U. S. No. 1 peas and \$5.00 per 100 pounds for U. S. No. 2 peas, in bags f. o. b. cars at country shipping points.

RICE The goal of 1,380,000 acres of rice is about 125,000 acres less than was planted in 1942. The goal acreage, if yields are normal, would produce around 66.8 million bushels as compared to 66.4 million in 1942. This is fairly close to processing capacity. Loans to eligible producers will be available under the 1938 AA Act, as amended, at 90 percent of parity.

COTTON The cotton goal for 1943 is 22,500,000 acres, about 810,000 fewer acres than were planted for 1942. Producers of short-staple cotton are urged to shift to varieties one inch or longer, or where practicable to other crops urgently needed in the war. Prices of American-Egyptian cotton will be supported through June 30, 1944, at not less than 90 percent of parity, at least 45 cents a pound for No. 2, 1½ inch American-Egyptian cotton. The support price will also be at least as high as it was in 1942, relative to the loan rate in Arizona for 1½ Middling Upland cotton. Loans will be available to eligible producers of upland cotton at 90 percent of parity.

POTATOES The goal for Irish potatoes is 3,260,000 acres, which is 17 percent larger than acreage planted in 1942. This should produce around 407,700,000 bushels if yields are normal. Price supports will be at least 90 percent of parity.

For sweetpotatoes, the goal is 757,000 acres harvested as compared to 707,000 acres harvested in 1942. With average yields, production should be about 63,361,000 bushels as compared with 65,380,000 in 1942.

FRUITS Suggested production of the 11 major fruits from 1943 bloom is 14,600,000 tons, fresh equivalent basis, which is about equal to production from 1941 bloom and only slightly less than from 1942 bloom. Production of deciduous fruits and grapes probably will approximate the 1936-41 average. The citrus crop may be 20 percent above average. The limited supply of canned fruits and juices will make increased packs of frozen berries desirable in 1943.

Military and lend-lease needs for dried fruits will be substantially greater than in 1942. Civilians will want large quantities to substitute for canned fruits and juices. Maximum production of dried fruits is desirable.

One-fourth of the 1942 pack of canned fruit and fruit juices, estimated at 86 million cases (No. 2½ can basis), probably will be bought for military and lend-lease uses. This will leave less for civilians than they would like to buy at present ceiling prices. Need for dried fruit and the shortage of cans will reduce the 1942 pack of many commodities. If imports of canned pineapple and pineapple juice are maintained and if fruit that cannot be used in other forms is canned, the total pack of all fruit for 1943-44 will be large enough to supply all governmental requirements and make available for civilians about 60 percent as much as they consumed in the average of the last five seasons.

VEGETABLES

Commercial truck crop acreage suggested for fresh market in 1943 is 1,720,000 acres, which is about the same as was harvested in 1942. If yields are normal, tonnage will be about 93 percent of 1942 production and about equal to the 1936-40 average.

Increases are suggested for carrots, kale, lima and snap beans, sweet corn, onions, cabbage, beets and tomatoes; no change for peas, spinach and asparagus; decreases for artichokes, peppers, eggplants, lettuce, watermelons, canteloupes, cauliflower, cucumbers and celery. Suggestions for larger or smaller acreage are based on the nutritive value of each vegetable, its requirements for labor and shipping space, and recent trends in acreage.

Market gardens near points of consumption are important sources of supply during the late summer and fall. Increased production is urgent wherever land, markets and labor are available. Home garden production also will be more important than in recent years.

The total pack of canned vegetables is expected to be nearly as large in 1943 as in 1942, although it may be curtailed somewhat by the need to conserve tin. Civilian consumption

already has been curtailed by orders requiring canners to set aside about 35 percent of the 1942 pack of certain fruits and vegetables for Government purchase. Government requirements will be much greater in 1943, leaving substantially less for civilians. This situation led to plans for immediate rationing of canned, as well as dried and frozen, vegetables and fruits. Prospective growers of vegetables for canning should assure themselves of a market before planting on a large scale.

As this was written, a series of specific price supports was being worked out, to include snap beans, corn, peas, tomatoes, beets, carrots, pumpkin and squash for processing, and cabbage for kraut. In general, support prices will be maintained through certification of canners agreeing to pay specified prices to growers and through Government commitment to buy the processed commodity at amounts that will support grower prices at about 1942 levels.

OTHER CROPS

The sugar beet goal for 1943 is 1,050,000 acres—virtually the same as acreage planted in 1942. Further increases would be difficult in view of the large labor requirements, competition with other essential crops, and limited processing capacity.

Suggested for 1943 are about 300,000 acres of sugarcane for sugar in Louisiana, and 40,000 acres in Florida. On the basis of normal yields, this would utilize nearly all available processing capacity in those States.

To relieve a potential shortage of rope and twine, goals were set at 300,000 acres of hemp for fiber and 50,000 acres for seed. However, it now seems likely that only enough seed for 200,000 acres will be available.

Tobacco goals call for 750,000 pounds of flue-cured, 385,000,000 pounds of burley, and 286,000,000 pounds of other domestic. These represent increases from the 1942 harvested acreages of 6 percent for flue-cured, 20

percent for burley, and 15 percent for other domestic types.

PRODUCTION TOTALS

Goals for all farm commodities in 1943 call for a 4-percent increase above production in 1942, assuming normal crop yields. Goals in 1942 were nearly 6 percent above actual production in 1941; the actual increase was 12 percent. The 1943 livestock goals are 12 percent higher than 1942 production. The 1942 goals were 9 percent above 1941 livestock production and the actual increase was about 12 percent. Crop yields per acre were at an all time high in 1942, around 12 percent greater than in 1941, and crop production was 14 percent greater. If yields had been normal, crop production called for by 1942 goals would have been about the same as in 1941. If yields are normal this year, crop production will drop back nearly to 1941 levels.

The table on page 9 compares

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid interest and taxes	Buying power of farm products ¹
1941			
January.....	104	128	81
February.....	103	128	80
March.....	103	129	80
April.....	110	129	85
May.....	112	130	86
June.....	118	132	89
July.....	125	133	94
August.....	131	136	96
September.....	139	138	101
October.....	139	141	99
November.....	135	143	94
December.....	143	143	100
1942			
January.....	149	146	102
February.....	145	147	99
March.....	146	150	97
April.....	150	151	99
May.....	152	152	100
June.....	151	152	99
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	169	154	110
November.....	169	155	109
December.....	178	155	115

¹ Ratio of prices received to prices paid, interest and taxes.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average, August 1909-July 1914	December average, 1909-13	December 1941	November 1942	December 1942	Parity price, December 1942
Wheat (bushel).....cents.	88.4	86.7	102.2	104.4	110.3	137.0
Corn (bushel).....do	64.2	57.7	66.9	75.9	80.2	99.5
Oats (bushel).....do	39.9	38.3	45.2	44.3	47.4	61.8
Rice (bushel).....do	81.3		147.0	148.9	162.4	126.0
Cotton (pound).....do	12.4	12.2	16.23	19.22	19.55	19.22
Potatoes (bushel).....do	69.7	62.3	82.7	108.4	111.8	111.5
Hay (ton).....dollars	11.87	11.09	9.43	9.84	10.46	18.40
Soybeans (bushel).....do			1.47	1.58	1.59	1.49
Peanuts (pound).....cents	4.80	4.6	4.79	5.94	6.19	7.44
Peanuts for oil (pound).....do			4.21	4.04	3.97	8.64
Apples (bushel).....dollars	.06	.91	1.09	1.24	1.43	1.49
Hogs (hundredweight).....do	7.27	6.83	10.32	13.44	13.27	11.27
Beef cattle (hundredweight).....do	5.42	5.19	9.34	11.39	11.43	8.40
Veal calves (hundredweight).....do	6.75	6.71	11.18	13.02	13.14	10.46
Lambs (hundredweight).....do	5.88	5.50	10.13	12.05	12.51	9.11
Butterfat (pound).....cents	26.3	29.9	36.0	47.8	48.9	40.8
Milk, wholesale (100 pound).....dollars	1.60	1.88	2.66	2.97	3.01	2.48
Chickens (pound).....cents	11.4	10.6	15.8	19.6	20.5	17.7
Eggs (dozen).....do	21.5	29.9	34.1	38.9	39.7	83.3
Wool (pound).....do	18.3	18.6	37.1	39.7	39.7	23.4
Tobacco:						
Flue-cured-types 11-14 (pound).....cents	22.9		17.8	40.0		28.6
Flue-cured-types 21-24 (pound).....do	13.6		14.6			13.3
Maryland-type 32 (pound).....do	22.9		24.41	28.5		22.4

¹ Revised.

² Base price crop years 1910-23.

³ Adjusted for seasonality.

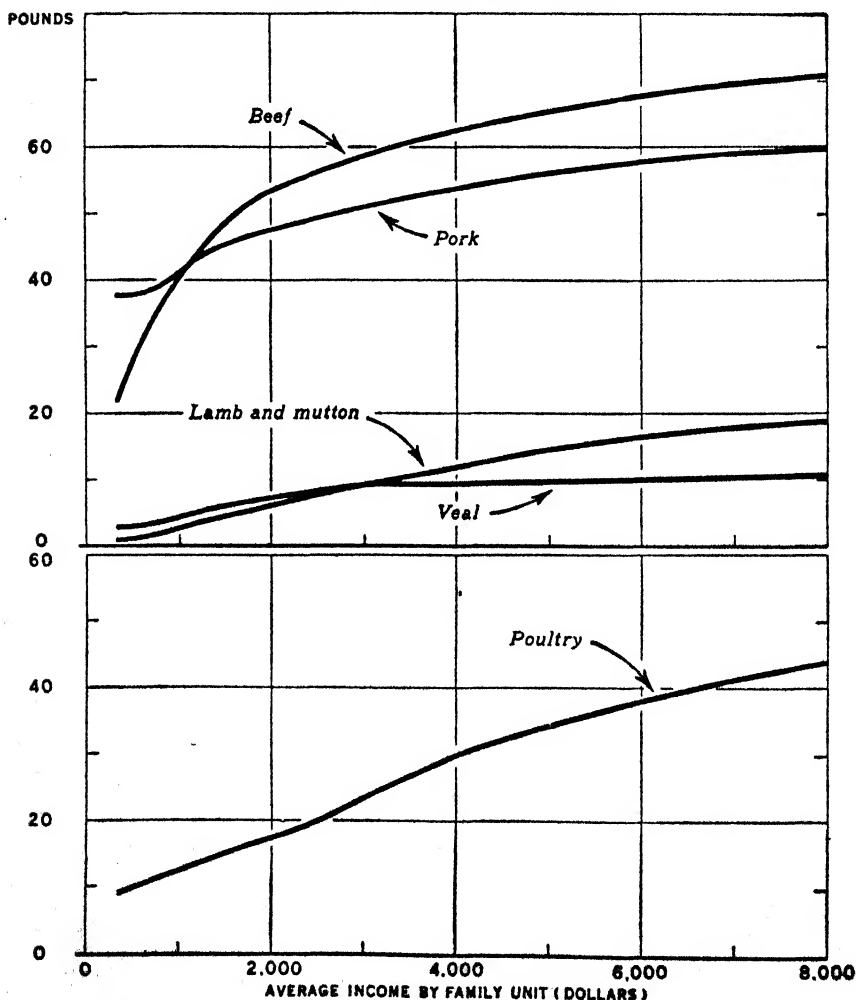
⁴ Base price crop years 1934-38.

1943 goals with 1942 goals and year-end revised estimates of 1942 performance. Production estimates in the goals are based on the assumption of "normal" crop yields—in most cases the 1937-41 average. Acreages shown in the table are planted acreages, unless otherwise indicated. Percentage changes from 1942 suggested in 1943 are in many instances different from those originally announced. This reflects a revision in 1942 estimates and not in 1943 goals, except for

potatoes and dry beans. The percentage changes, of course, represent national averages. Much larger changes will be necessary in some areas; in others, there will be less possibility of shifting production.

Inasmuch as the goal for pigs is a 15 percent increase, revisions in 1942 estimates made it necessary to change the numbers goals for 1943. For a similar reason, the acreage goal for truck crops is slightly different from that announced originally.

ESTIMATED MEAT CONSUMPTION PER CAPITA (RETAIL WEIGHT) BY FAMILY INCOME LEVEL. 1942



Production Goals for 1943, With Comparisons

Commodity	Units	1942 goal or expected	1942 reported ¹	1943 goal or expected	1943 percent of 1942 reported ¹
		<i>Thousands</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Percent</i>
Wheat.....	{ Acres --- Bushels.....	55, 000 793, 000	52, 533 981, 327	52, 500 651, 000	100 66
Rye.....	{ Acres ¹ --- Bushels.....	3, 560 48, 000	3, 837 57, 341	3, 600 40, 000	94 70
Rice.....	{ Acres --- Bushels.....	1, 320 65, 000	1, 505 66, 363	1, 380 66, 800	92 101
Corn.....	{ Acres --- Bushels.....	93, 750 2, 675, 000	91, 011 3, 175, 154	95, 000 2, 834, 000	104 89
Oats.....	{ Acres --- Bushels.....	40, 000 1, 200, 000	42, 656 1, 358, 730	37, 300 1, 137, 650	87 84
Barley.....	{ Acres --- Bushels.....	16, 000 360, 000	19, 433 426, 150	18, 000 392, 000	93 92
Grain sorghum.....	{ Acres --- Bushels.....	10, 000 120, 000	9, 755 149, 795	10, 000 127, 000	103 85
Hay, all.....	{ Acres ¹ --- Tons.....	72, 000 94, 000	72, 744 105, 328	71, 100 94, 500	98 90
Flaxseed.....	{ Acres --- Bushels.....	4, 500 36, 000	4, 691 40, 660	5, 000 36, 250	107 89
Soybeans for beans.....	{ Acres ¹ --- Bushels.....	9, 000 153, 000	10, 762 209, 559	10, 500 189, 000	98 90
Peanuts picked and threshed.....	{ Acres ¹ --- Pounds.....	5, 000 3, 750, 000	3, 690 2, 504, 440	5, 500 3, 712, 500	149 148
Dry beans.....	{ Acres --- Bags ²	2, 600 20, 400	2, 135 19, 608	3, 300 25, 542	155 130
Dry peas.....	{ Acres --- Bags ²	665 6, 450	501 7, 160	665 6, 078	133 95
Cotton.....	{ Acres --- Bales ⁴	25, 000 12, 000	23, 310 12, 982	22, 500 11, 300	97 87
Tobacco:					
Flue-cured.....	{ Acres ¹ --- Pounds.....	841 750, 000	792 824, 115	841 750, 000	106 91
Burley.....	{ Acres ¹ --- Pounds.....	383 350, 000	351 331, 005	421 385, 000	120 116
Other domestic.....	{ Acres ¹ --- Pounds.....	272 286, 000	237 262, 068	272 286, 000	115 109
Sugarcane for sugar and seed (sugar).....	{ Acres ¹ --- Tons.....	330 525	329 537	340 525	103 98
Sugarbeets (sugar).....	{ Acres --- Tons.....	1, 050 1, 900	1, 049 1, 664	1, 050 1, 900	100 114
Potatoes.....	{ Acres --- Bushels.....	3, 060 384, 000	2, 793 371, 150	3, 160 390, 600	117 110
Sweet potatoes.....	{ Acres ¹ --- Bushels.....	850 70, 000	707 65, 380	757 63, 361	107 97
Commercial truck crops ³	{ Acres ¹ --- Acres ¹	1, 840 4, 919	1, 692 3, 392	1, 676 4, 709	99 139
Hay crop seeds.....	{ Acres ¹ --- Acres.....	4, 919 ---	3, 392 ---	4, 709 300	99 ---
Hemp for fiber.....	{ Acres --- Tons.....	---	---	---	---
Fruit (fresh equivalent).....	{ Acres --- Tons.....	---	---	---	---
Cattle and calves on farms, Jan. 1.....	{ Number --- Number.....	---	---	---	---
Cattle and calves slaughtered.....	{ Pounds --- Pounds.....	---	---	---	---
Dressed weight.....	{ Pounds --- Pounds.....	---	---	---	---
Sheep and lambs on farms Jan. 1.....	{ Number --- Number.....	---	---	---	---
Sheep and lambs slaughtered.....	{ Number --- Number.....	---	---	---	---
Dressed weight.....	{ Pounds --- Pounds.....	---	---	---	---
Hogs:					
Spring pigs.....	{ Number --- Number.....	---	---	---	---
Fall pigs.....	{ Number --- Number.....	---	---	---	---
Hogs, slaughtered.....	{ Number --- Number.....	---	---	---	---
Dressed weight.....	{ Pounds --- Pounds.....	---	---	---	---
Lard.....	{ Pounds --- Pounds.....	---	---	---	---
Milk cows.....	{ Number --- Number.....	---	---	---	---
Milk.....	{ Pounds --- Pounds.....	---	---	---	---
Chicken, dressed weight.....	{ Pounds --- Pounds.....	---	---	---	---
Eggs, total production.....	{ Dozen --- Dozen.....	---	---	---	---
Turkeys, dressed weight.....	{ Pounds --- Pounds.....	---	---	---	---

¹ Harvested. ² For fresh market.

³ 100-pound bags, uncleaned.

⁴ 500-pound bales.

¹ Revised through January 18.

Farm Mobilization Campaign

LIKE any soldier on the fighting fronts, the American farmer in 1943 must pit his full strength against the Axis aggressors to help win the greatest war in history. He must try to produce more Food for Freedom than the Nation has ever seen in a year's harvest. He must do this with a limited labor supply, limited machinery and limited transportation.

He must produce, not willy-nilly, but more of specified war crops; he must cut away accustomed acreage from crops less needed, crops least beneficial to the diet of a world at war. He must furnish harvests to feed not only our fighting men and the 130 millions in this country, but also millions in the United Nations and in areas which our armed forces reoccupy.

To help the farmer do this job a Nation-wide campaign for farm mobilization has been worked out by the Department of Agriculture. All agricultural resources of the Nation are to be mobilized to achieve maximum production of needed crops and livestock. The aim is to enlist the aid of every farm in the Nation to work out the type of production most necessary to winning the war.

THE President, himself, set forth the importance of the farmer's task in his proclamation fixing January 12, 1943, as Farm Mobilization Day. In this proclamation he asked farmers to gather "wherever possible with Department of Agriculture representatives, Extension Service agents, vocational teachers, State officials, farm organizations, and others concerned, in order to discuss ways and means of insuring for the year 1943 the maximum production of vital foods upon every farm in this country."

The President expressed his appreciation for the record harvests achieved in the last 3 years, and emphasized that the country owes farmers a debt of gratitude. As he succinctly put

it, "Food is no less a weapon than tanks, guns, and planes."

The President depicted another important feature which every farmer and every farm administrative worker should hold in mind. Farm Mobilization Day, he said, should be "a symbol of a free America; a symbol of the might and productivity of our Nation, and a symbol of our unalterable determination to put to full use our agricultural resources, as well as our other resources, in the achievement of complete victory."

THE mobilization campaign began with the four regional meetings on production goals the first half of December. At this time the Secretary of Agriculture, Claude R. Wickard, the Assistant Secretary of Agriculture, Grover B. Hill, and a staff of Department officials presented a picture of the National needs and of the goals to be met by each of the four regions. In general, these goals reflect the need for foods of most value in the wartime diet. They call for all the milk we can produce, more meat and eggs, more feed grains to support increased livestock production, more dried beans and peas to help supply the proteins needed in our diet, more poultry to supplement our supply of other meats, more of the vegetables that are essential because of their high food value, more oil crops and more long-staple cotton.

As soon as the meetings were concluded in each of the 4 regions, the USDA State War Boards held meetings to fix the goals for the individual counties, and then held State-wide or district meetings with the County War Boards to help them work out their plans for farm mobilization. This entailed presenting the over-all National picture, the regional and specific State production goals, and the importance in the county of working out the goals with the cooperation of every farmer.

From that point on the details of farm mobilization lay with the County War Boards. Farm Mobilization Day committees participated in community or county meetings at which farmers heard explanations of the county farm production goals and other requirements for carrying out the National organization of agricultural resources.

The County Boards arranged training meetings for the AAA community committeemen. They worked out methods to publicize the most important phases of the farm plan so that the final farm plan "sign-up" could be completed promptly without loss of time, when, on Mobilization Day and after, the AAA committeemen contacted each farmer.

The farm plan data provide the basis for county War Board recommendations, regarding the provision of needed labor, machinery, materials, and transportation. In passing on these plans the county War Boards have followed a practice of immediate handling of urgent cases with daily meetings when necessary. At these sessions an indication is given by each agency represented on the Board as to whether the need of each farmer can be met. Notification is given the farmer of decisions made in their particular cases. The county boards, too, are following up on commitments to make sure that the farm program can be carried out by the individual farmer. In this connection a schedule of the dates when commitments are to be fulfilled is kept by each board.

ONE move to help create maximum local interest is the honoring of farm families by publicizing 1942 production and 1943 plans and wherever feasible by selection of a typical farm family. Since numerous families would be representative, in many instances a committee has been named by the War Board to select the families who have contributed materially to the agricultural war program and, from this group, to choose by lot one family.

In making the selection of the several

families, a few basic points are considered. The family must have met or exceeded all the production goals for the farm for 1942, overcoming difficulties arising from war conditions, and must be signed up for maximum possible war production in the 1943 Farm Mobilization. The family must have taken definite and positive steps to maintain the productivity of the farm through soil-building and conserving practices. It must typify the best in cooperation and community activities such as pooling labor, machinery and transportation. Its record should be one of contributing materially to community accomplishments.

In many counties arrangements have been made for a public recognition ceremony sponsored by a civic or farm organization, including a luncheon or dinner meeting with an appropriate program. Presumably a part of this program will be the introduction of the typical family and an explanation by the family of its work in 1942 and its plan for participation in 1943.

Included in the planning have been the Mobilization Day posters, school assembly programs, press and radio participation and other activities to keep the farmers informed.

Farmers everywhere have been anxious to "join up" in the mobilization, hoping to maintain the remarkable records of the last 3 years. They know that, as the President states, "although they have produced much this year (1942), the Nation will require even more of them during the year that is now before us."

They recall, too, the President's further words: "In full realization of the many difficulties affecting farm production during wartime, the people of this Nation place reliance on the zeal, devotion, and unstinting effort of farmers to do their part toward ultimate victory."

M. CLIFFORD TOWNSEND, *Director of Food Production*

Farm Labor and 1943 Goals

AGRICULTURAL production in 1943 probably will call for at least as many workers as were employed in 1942. If yields are normal the crop production represented by the goals will be only 89 percent of the exceptional crop of 1942. However, some of the recommendations relate to crops with relatively high labor requirements. Such are the 17 percent increase in potato acreage, and the 20 percent increase in acreage of burley tobacco. The suggested acreage for commercial truck crops for fresh market is slightly less than that harvested in 1942.

While livestock production in 1943 is set at 112 percent of 1942, it is likely that if further losses of herders, shearers, range riders, dairy workers, etc. can be avoided, the 1943 goal can be reached without any great expansion in the farm labor force. The number of cattle, calves and sheep will be somewhat reduced next year. However, skilled management will be required, to attain a 15 percent increase of both spring and fall pig crops in 1943 over 1942 levels, and a two percent increase over 1942 in the production of milk. Much of the additional milk can be secured through better feeding and care, without requiring additional labor.

AVAILABLE estimates of gross losses of farm manpower, already sustained and anticipated, indicate a labor problem in 1943 of considerable magnitude. Between April 1940, and October 1942 nearly 3 million farm workers, actual or potential, of both sexes, were lost through their having left the farms, having gone into non-farm work although retaining farm residence and having entered the armed forces. This estimate includes only rural farm persons; it does not include persons under 14 years of age nor older persons unfitted for farm

work. Between October 1942 and October 1943, the already depleted farm labor reserves may be reduced by another 1.2 million, of whom about 700,000 may enter the armed forces. This estimate assumes an armed force of 10.5 million men by January 1944 and a further net increase in non-agricultural employment. Under the Tydings amendment to the Selective Service Act more persons may be retained on farms than is assumed in this estimate, from among those otherwise eligible for induction into the armed forces, who are "found by a local board to be necessary to and regularly engaged in an agricultural occupation or endeavor essential to the war effort." No broad estimates are as yet available as to the number of farm men who will be deferred from military service by virtue of the new regulations.

IN certain respects the agricultural manpower situation in the spring months of 1943 may be as difficult as that of the summer, even though numbers in the armed forces and in non-agricultural employment will continue to increase throughout the year. For one thing, the services of women and children cannot be utilized as well in the spring as in the summer, since much of the early season farm work is so heavy that it can be adequately performed only by adult male labor. School attendance greatly reduces the availability of younger persons for farm work. Moreover, between April and July there is normally a seasonal migration to farms of workers from nonfarm areas, which helps to meet the greater demand for labor during the summer months.

Difficult as the 1943 farm manpower problem may be, past experience supports the view that it will not prove insuperable. Despite the loss of an estimated 3 million rural farm per-

sons from the farm labor reserves between April 1940, and October 1942, BAE estimates that on October 1, 1942, the number of persons employed on farms was only about 250,000 less than on October 1, 1940. Of course, many of the replacements lacked the skill of the farm workers whose places they took, being mainly women, children, school-age persons and older men. Nevertheless, until last winter, there was little serious concern among farmers over farm labor shortage, and despite widespread uneasiness on that subject during 1942, last year, with the aid of good weather, the farms of America produced about 12 percent more than in 1941 and 27 percent more than the 1935-39 average.

THE experience of American farmers during 1942 is reflected in the results of a recent nation-wide survey carried out by the War Boards of the Department of Agriculture, in the course of which 6,100 farmers in 567 counties were interviewed about the labor situation on their farms and asked to comment on the outlook for 1943. Entry of farm workers into the armed forces made up one-fourth to one-half of total gross losses of farm manpower, except in the West North Central States, where this source of loss exceeded that due to movement of farm workers into nonfarm employment, and in the Mountain States, where these two types of loss were practically equal. Although the majority of persons who shifted to nonfarm employment moved away from the farms, in the different geographic divisions the proportion of such persons varied widely. In the East North Central States nearly 40 percent of the persons accepting nonfarm employment continued their residence on farms. In September 1942 the farm employment total included nearly 500,000 fewer men of the 18 to 44 age group than was the case a year earlier, a decrease of 10 percent. There were nearly 6 percent more men over 45

years of age and 5 percent more adult women employed in agriculture than in September 1941, while the number of boys and girls 14 to 17 years of age was 14 percent greater. Employment of children under 14 years of age was 8 percent larger than a year earlier. These figures are the more significant in that this survey took no account of losses of workers hired for short periods.

The results of the War Board Survey indicate that gross losses of farm workers were heavier on farms of large acreage than on smaller ones, although the very smallest farms also suffered losses that were disproportionately great. Large farms, on the other hand, were apparently able to replace losses more readily than smaller farms.

UNDER the conditions of manpower shortage in prospect for 1943, it is obvious that the utmost possible effectiveness must be achieved (1) in recruiting farm workers from sources hitherto only partly utilized or altogether neglected, (2) in placing workers in areas and on farms where they will do the most good, under the best possible conditions of employment, (3) in providing such management and supervision as will insure the best possible use of all labor available, and (4) in utilizing to the utmost all labor saving machinery. Most of this can be achieved only by effort put forth on the farm and in the rural community; it will require active cooperation between farmers and local organizations. State and national agencies are prepared to assist.

A BASIC step in making use of all our human resources is to find out where unemployed or underemployed manpower is. In certain areas, e. g. in the cut-over districts of northern Great Lakes States, in the Appalachian highlands and the Ozarks, —steps have been taken to discover the number and location of persons not now effectively employed who are able

and willing to move to places where they can contribute more effectively to increased production of food. By arrangement between the Employment Service and the Farm Security Administration in Wisconsin a beginning has been made at moving prospective dairy workers from the cut-over areas to milk-producing counties in the southeastern part of the State. Similar work is being initiated in Missouri and Illinois. In Kentucky, under similar experimental arrangements between U. S. Employment Service and Farm Security Administration, and with the cooperation of the State agricultural colleges in Kentucky and Ohio, a few score prospective year-round dairy workers are being assisted to move to northern Ohio. On the way, at Columbus, Ohio, they receive a three weeks course of training, to facilitate their entry into a type of agriculture rather different from that to which they are accustomed.

A recent survey in the Appalachian highlands reveals that since April 1940, when the last Census was taken, the reservoir of manpower has been greatly depleted. The movement out of the area, into the armed forces and into war jobs, or into jobs from which others have moved into war industries, has been haphazard and without guidance from any public agency, such as the Employment Service. The men and women who have left were drawn from the age groups of greatest vigor and from among those who had the most schooling. They came from the parts that were most accessible. In the more isolated districts, a substantial reservoir of labor of this same sort remains—men and boys of working age from farm families, who can be more productively employed in farm work elsewhere than they are at present. In less remote districts, those whom the recent migration has left behind, are mostly unmarried girls and youths of school age who may be more useful in industry than in agriculture.

A similar survey of twenty-four Spanish-speaking villages in New Mexico indicates an outward movement exceeding that of all recent periods. Inductions into the army and migration to employment in war industries have taken 45 percent of the men from 15 to 65 years of age. Less than 30 percent of the normal number of men between 20-30 years of age remain in the villages.

DURING the past year the U. S. E. S. and the F. S. A. have combined forces to provide seasonal workers for agricultural operations and to return them afterwards to their homes. From the Appalachian area, apple, tomato, and bean pickers have been moved to New York and New Jersey. Tobacco workers have been supplied to Shelby County, Kentucky and Hartford County, Connecticut. Sugar-beet workers have been sent to Michigan, and most recent of all, cotton pickers have been temporarily transferred from the Mississippi Delta and southeastern Missouri to Arizona and New Mexico. Camp and housing facilities have been supplied. These and other instances supply a basis of experience which promises well for 1943 as regards large-scale transferral of seasonal labor.

However, labor cannot be transferred unless it is available. In order to stimulate to the utmost all agencies capable of contributing to the mobilization of workers for food production, the Extension Service, the Employment Service and the Office of Education are considering a program to facilitate the recruiting, training and placement of school youth. Through its neighborhood leaders the Extension Service, in cooperation with the War Boards, will assist communities in making available for the agricultural war production effort every possible worker, man or woman, boy or girl.

SOME light is thrown upon prospects for this season by the nationwide War Board Survey referred to above. While farmers generally had a pessimistic outlook with respect to the farm labor supply this year, not only as regards adult male workers but as regards the number of women and children likely to be employed in 1943, 67 percent indicated that they expected to handle as large a crop and livestock program in 1943 as they did in 1942. In the North Central States 76 percent of the farmers took this point of view, in the Mountain and South Atlantic States only 61 percent. The highest percentages of

those who expressed optimism with respect to 1943 production related to farmers in the smaller size groups and the lowest percentage to the class of farms of the largest size. When asked specifically as to the number of each of the major types of livestock that they intended to handle in 1943 farmers indicated increases in every class. Greater numbers of milk cows, hogs and pigs in 1943 were expected by farmers in each of the geographic divisions except the Pacific. In two divisions minor decreases in beef cattle were anticipated and in two, also, small decreases of sheep and lambs.

WILLIAM T. HAM.

AAA Program and the Goals

NOTHING we can send to Britain, Russia, China, the Fighting French or the enslaved peoples we will liberate in 1943, will yield us a bigger return in production—in fighting spirit—in actual destruction of the enemy—than food.

In 1942, despite severe shortages of labor, machinery, and supplies, American farmers doubled soybean and peanut output over 1941, produced 7 billion more eggs, 20 million more hogs, and 4 billion pounds more milk. Total farm production was 12 percent above any previous year in history.

But in 1943, needs are even greater. This year we used about 13 percent of our total farm output to supply our armed forces and our allies. In 1943, we must put 25 percent or more of our total farm output to such use—and this 25 percent includes at least the following: More than one-fourth of our meat, one-third of our eggs and lard, and more than one-half of our canned vegetable production. The 1943 goals call for a total production even larger than the amazing output of 1942, despite much more serious scarcities of labor, machinery and supplies. Indications are that with normal yields next year, as contrasted with the un-

usually good yields of 1942, crop production may be smaller and livestock production larger.

Such demands strain the American farm plant to the very limit. We have neither an acre nor a minute to spare, for acres and minutes mean human lives. Yes, human liberty!

TRIPLE-A payments in 1943 will be made according to how well each farmer carries out his individual plan representing his share of the 1943 farm war production goals.

Triple-A committeemen again will conduct the goals sign-up campaign. They will be responsible for working out with virtually every farmer in the country complete plans for individual farms covering 1943 crop and livestock production.

IN making out his 1943 production plan, each farmer will specify (a) the crop adjustments he will make, and (b) the production practices he will employ to increase his yields. For making adjustments and for carrying out production practices, farmers can earn payments which serve as incentive to produce full amounts of the needed crops.

We cannot afford to produce a bushel more wheat or a bale more short staple cotton than is actually needed. Triple-A acreage allotments will again serve as guides for planting the right acreage of needed crops. Allotments are applicable for corn, cotton, peanuts, rice, tobacco, and wheat.

In accordance with the law the 1943 wheat allotment has been set again, as in 1942, at the minimum of 55,000,000 acres. And following the formula set up under the Agricultural Adjustment Act, the allotment of cotton has been reduced to the minimum of 27,300,000 acres. The national 1943 goals, however, are 52½ million acres for wheat and 22½ million acres for cotton.

The allotments for wheat and cotton, although set as low as the law permits, are still larger than our actual needs. Therefore, farmers are urged to shift part of their wheat and cotton acreage into war crops or designated feed crops and in so doing they will be cooperating fully with the program.

The allotment for edible peanuts is 1,610,000 acres, determined in accordance with legislative requirements. Because of the urgent need for oil, a peanut-for-oil goal calls for 3,890,000 acres, making a total peanut goal of 5,500,000 acres.

SO important is it that the acreage allotments be closely adhered to that deductions for planting cotton, wheat, and tobacco in excess of the allotments are set at *10 times the payment rate*. In other words, if a farmer plants 10 percent above his allotment of these crops, he will lose his entire crop payment.

One other important provision will be used in the 1943 program to emphasize the importance of meeting the war crop goals. If a farmer fails to meet 90 percent of the war crop goals for his farm, deductions will be made from his crop payment at a rate of \$15 per acre.

It is obvious from the above that the 1943 Triple-A program is concen-

trated on farm production of the things we need in accordance with the national, State, county, and individual farm goals. At the same time, it is endeavoring to make production as selective as possible.

THE 1943 program also stresses the importance of conservation practices which increase yield per acre here and now. In view of the tremendous demands on the American farm plant and the scarcities of labor and farm machinery the greatly increased use of single practices such as contour cultivation and others cannot be over-estimated. Now, more than ever before, farmers must realize that yields can be increased by effective production practices.

The Triple-A, in cooperation with the Soil Conservation Service and State technical committees, has named the practices which are especially effective in given areas, and has thus placed great responsibility in the hands of the local Triple-A officers throughout the country.

Marketing quotas, approved by two-thirds of the growers voting in free elections, will again be in effect on cotton, wheat, peanuts, and flue-cured, burley, fire-cured, and dark air-cured tobacco, and will again divide equitably among growers of these commodities the responsibility of adjusting them to our war-time economy. Also, quotas assure each producer of the commodity a fair share of the available market.

A MAJOR contribution of the AAA organization to the war is the local work of its farmer-elected county and community committees. The farming experience and the training developed over the last 9 years, which is represented by these committees, provide a wealth of practical knowledge, information, and understanding of both local and national farm problems.

FRED S. WALLACE, *Chief,*
Agricultural Adjustment Agency.

Vegetable Goals and Problems

VEGETABLE farmers face an increasing number of production and marketing problems brought on by the war. Labor, fertilizer, insecticides, and equipment are becoming scarce. At the same time increased consumer purchasing power and the requirements for Army, Navy, and lend-lease have increased needs. To meet these needs in 1942 the Department of Agriculture sought to expand the production of canned green peas and tomatoes. It supported the prices of most canned vegetables and Irish potatoes to be sure that sufficient supplies were produced. Steps were taken to process as much cabbage kraut as possible from the unexpectedly large crop. On the other hand, in order to conserve tin and steel plate, the War Production Board limited the canning of certain vegetables. It also required considerable proportions of the canned vegetable pack to be set aside for Government use. Radical changes are occurring in the production and consumption of vegetables. What further changes are in store for 1943?

Production in 1942 was at a peak largely because of favorable weather. Irish potato acreage was considerably lower than the average of the last 10 years but because of high yields, production was slightly greater than average and about 4 percent over 1941. The greatest increase was in the 10 surplus Western States. Yields and production were lower in the three Eastern surplus States. To provide for increased needs in spite of yields in 1943 that will probably be lower than the high yields of 1942, suggested acreage goals for 1943 have been set substantially over 1942. Sweetpotato production in 1942 was 5 percent over 1941 because of higher yields. There is need for greater acreage in 1943.

SUPPLIES of fresh vegetables in 1942 were fairly plentiful. But

fall supplies of snap beans, lettuce, celery, green peas and most other vegetables, with the exception of carrots, were smaller than in 1941. Suggested 1943 acreage goals for fall and winter fresh vegetables are 101 percent of 1942 acreage (excluding watermelons and cantaloupes). Greatest increases are asked for carrots, lima beans, snap beans and onions and greatest decreases for cauliflower, cucumbers, celery, eggplant, lettuce and green peppers.

Production of green peas for processing increased about 24 percent in 1942 compared with 1941 but the pack probably will fall short of the 1942 goal by about 8 percent. Greatest increases of production occurred in the Western and North Central States and in New York. Inadequate spring rainfall in Maryland and Delaware lowered production. Production of tomatoes for processing is indicated to be about 13 percent greater than 1941, the greatest increase occurring in the Mid-Southern area. Abnormal rains reduced yields in the Northeast. The canned tomato pack probably will be about 10 percent short of the goal.

CIVILIAN consumption of canned vegetables will be curtailed in 1942-43 because a large part of the pack is needed for Government use and because carry-overs into 1942 have been negligible. On the whole, the supply of tomatoes, green peas, corn, snap and lima beans, other than for Government use, will be only about 60 percent of 1941. Canned root crop and kraut supplies will be much less than in 1941. Part of the Government supplies in 1942 and 1943 will be used to feed a larger Army and Navy and there will be fewer civilian consumers. Nevertheless, more fresh and quick frozen vegetables and potatoes will be needed to substitute for the smaller civilian supplies of canned goods.

There are relatively large supplies of quick frozen vegetables for the 1942-43 season. Cold storage holdings of these vegetables on December 1 were 15 percent greater than a year earlier. The production of dehydrated vegetables, while still not of major importance, is becoming increasingly important, especially for potatoes, cabbage, corn, and carrots. Almost all dehydrated vegetables are produced for military use. They are easily stored and occupy relatively little shipping space. Requirements in 1943 will be several times as great as in 1942.

ALTHOUGH greater production will be needed in 1943, many problems may make difficult the continued production of vegetables even at the present level. As the war progresses production goods will become more scarce. Most of the crops were harvested in 1942 but largely through the utilization of school youth, the aged, and through careful planning. In 1943, labor supplies will be still more scarce than in 1942. Moreover, transportation problems will probably come to the fore as greater demands are made on the railroads to move military goods, and as motor trucks wear out. The scarcity of construction materials limits processing facilities to existing plants and lines. Finally, the high yields that were responsible for peak production in 1942 may not be repeated in 1943. The following suggestions may be of assistance in overcoming some of the difficulties that will be associated with 1943 production.

A repetition of the high yields of 1942 should not be depended on in 1943 to provide needed production. Improved growing practices, higher prices, and similar conditions may be partly responsible for an upward trend of yields but it is doubtful if these conditions account for the full measure of yields obtained in 1942. Good weather was a deciding factor. Ac-

cording to available records the odds are against a repetition in 1943 of the high yields of 1942. It is even likely that the production difficulties that will be encountered in 1943 will cause yields to be lower than average. Average yields of the last 5 or 10 years applied to prospective acreages would give a more probable determination of production than the extension of the favorable yields of more recent years.

THE possible scarcity of fertilizers makes necessary a consideration of the most productive method of utilizing available supplies. Fertilizer may be most productively utilized in areas if applied up to the point where the additional returns from additional applications are equal on all farms. Preliminary studies have shown that in most cases relatively small returns are secured in the production of Irish potatoes from nitrogen applications of over 60 pounds per acre. Thus, it has been estimated that in Maine a reduction of 10 percent in the application of nitrogen would only reduce production by 1 percent. Also, fertilizer supplies could be conserved by obtaining the greatest production increases in areas that require small applications of fertilizer. For example, green peas are produced in the Pacific Northwest with relatively small fertilization. Finally, most supplies of fertilizer should be made available for the vegetables which produce the most nutrients per unit of fertilizer application. A determination of the relative nutritive output of different vegetables per unit of fertilizer input could furnish a basis for priority actions in the allocation of fertilizer.

LABOR shortages as they affect the intensive labor needs of vegetable farmers will be a decisive factor in 1943 production. Many methods of alleviating labor shortages have already been outlined elsewhere. The

following suggestions are made primarily with reference to vegetable production:

Greater diversification by planting crops with different maturing dates would reduce peak needs for labor. Government production and purchase programs could implement diversification on the farm by diversifying requirements as much as possible.

Similarly, plantings of the same crop with different maturing dates either by choosing early and late varieties or by spreading planting dates or by planting at different elevations, as the practice is for green peas, would tend to extend the harvest and, therefore, remove some of the peak labor needs.

The under-utilized labor supply on many low-income farms could be tapped as occurred in the expansion of tomato production in the Ozark area.

Other things being equal, crops could be grown which produce most nutrients of a balanced nature per unit of labor input.

LIMITED processing facilities have been cited as an important obstacle to expanding the production of processed vegetables. However, in many cases plants are only being partly utilized. At the peak of the season many are utilized only for a period of from 10 to 12 hours per day. Equipment is only partly utilized before and after the peak of the harvest and is not utilized during the night. If increased production is needed, it may be desirable to utilize to full capacity the existing plants, rather than to construct new plants or lines and thereby divert materials needed for military purposes. More intensive use of existing plants may be achieved in the following ways:

(1) By lengthening the working day. It may be difficult to obtain workers who are willing to work at night but payment of higher wage rates for such night work would be a step in over-

coming this difficulty. Such action might be cheaper in the long run than building new plants or lines that would not be needed after the war.

(2) By shifting contracted production from plants that are operating at a peak and have surplus supplies to nearby plants that are operating at less than capacity.

(3) By further diversifying the present purchase and production program on canned vegetables. The production of a greater variety of vegetables and products would make possible a more intensive use of equipment. Moreover, the differences of maturing dates for the different crops would permit canning operations at near peak levels throughout the canning season.

MANY processing crops are usually graded by a representative of the processor. This leads in some cases to strained relationships with the farmer and the reluctance of some farmers to grow processing crops. Improved grading practices under Federal supervision might facilitate production increases by improving farmer-processor relationships. More field supervision by processors might also be helpful.

A COMPARISON between the nutritive value and transportation requirements of the different vegetables would be useful in the allocation of transportation facilities should they become short. Much inedible material is usually shipped with many crops. For example, about 55 percent of fresh green peas are pods which are discarded by consumers although the pods must be transported. This situation may be remedied for some crops by discarding some of the waste before shipping. For example, carrots may be transported without tops. The encouragement of more localized and home production might also be desirable to economize on long-haul shipments.

With the growing scarcity of re-

sources, greater production of those crops which contain the most nutrients, and reduced production of other crops is urgent. Such action appears to be the logical consequence of a war economy. However, all of

the input and output relationships associated with labor, fertilizer, transportation, and other factors, need to be considered before such action is taken.

WILLIAM KLING.

Recent Transportation Developments

FARMERS are being asked to produce a record volume of food and fiber in 1943. In the face of manpower shortages and other obstacles, that will be a major task. An equally important and difficult task will be the transportation of these products to the places at home and abroad where they will be most needed, and the movement of necessary supplies to the farms.

The war has greatly increased the volume of passengers and goods to be moved at precisely the time when two important branches of the transportation system are being drastically curtailed, *viz.*, motor carriers and coastwise and intercoastal shipping.

Because of the shortages of rubber and in some regions gasoline, the lack of new trucks and passenger vehicles, and the dwindling supply of replacement parts, motor transportation is playing a much reduced role as compared with its important place in the period before Pearl Harbor. The trucking of fresh fruits and vegetables to the 12 principal cities was 12 percent less in volume in 1942 than in 1941.¹

The manpower problem is acute in the for-hire trucking industry, as reported by the United States Employment Service. The principal shortages are in drivers, mechanics, rate clerks, and unskilled labor. The

industry is meeting the problem partially by a gradual increase in the employment of women in the office jobs formerly held by men. It is thought that more women might be used as drivers of light trucks and as mechanics. Plans have been discussed for drawing men from the less essential transportation services and placing them in "war-essential" transportation jobs.

Even more drastic has been the reduction of coastwise and intercoastal shipping. Intercoastal service has been completely eliminated and of late very few ships have operated along the Gulf and Atlantic seabords. Coastwise shipping is not likely to recover until the submarine menace is eliminated or at least reduced substantially from its present level of intensity and more ships are made available. Intercoastal shipping will not return to the old trade routes until the war is over.

The United States normally imports large quantities of sugar, coffee, tea, and tropical fruits. These imports require the use of a substantial volume of seagoing shipping. The problem of ocean shipping has become serious, partly because of the expanded demand for space to carry lend-lease goods to our Allies, partly because of the huge task of transporting and supplying our growing armed forces abroad, and partly because merchant ship losses through enemy action exceeded new construction until recently. Cargo ships are now being built faster than they are being sunk, but the United Nations still have

¹ However, the large trucking concerns have been hauling a record volume of traffic. The American Trucking Associations, Inc., reports that 201 commercial truckers operating in 41 States carried 12.8 percent more freight in October 1942 than in October 1941. The A. T. A. index of traffic, computed on the basis of 100 for the average monthly tonnage of the reporting truckers during the three-year period 1939-40, was 166 for October 1942.

fewer ships than they need. It has been necessary, therefore, to restrict the importation of some foods and other products and to use the scarce shipping space for more pressing lend-lease and military needs.

OUR railroad system is the largest in the world. But extensive as it is, the rail network could not assume the added burden of motor, inter-coastal and coastwise traffic. The motor carriers especially must be kept in operation for essential service.

The vital question is whether the railroads can do the job ahead with such aid as they can get from the motor carriers and other agencies of transportation. The answer depends upon the answers to several collateral questions. One of the most important of these is: How much traffic will have to be diverted from the other agencies to the rails? And the question of diversion in turn revolves around policies affecting tire production and rationing, gasoline rationing, allocation of steel and other strategic materials to construct and maintain equipment, and the supply of labor. Another vital question is the extent to which facilities are to be used efficiently, *i. e.*, better loading, more direct routing, etc. And, of course, the question of adequacy is influenced by the volume and character of the total traffic the Nation will produce.

AT this moment, the greatest or at least most developed threat to rail operations is to be found in the rapidly worsening manpower situation. Particularly serious are the shortages in the supply of maintenance of way and shop labor. Director Joseph B. Eastman of the Office of Defense Transportation predicted in December that the railroads would have to find 168,000 new workers by July 1, 1943, to meet the war needs of the country. The chief sources of this supply will have to be women, older men, and men now employed in the

so-called less essential occupations. While the use of the older workers involves a loss in efficiency, it is preferable to bear with inefficiency rather than do completely without some services. The necessity of finding large numbers of new employees for transportation enterprises in the months immediately ahead focuses attention on the importance of intensive and systematic training programs. Many of these new employees will be common or unskilled labor drawn from the bottom of the labor market. The most competent among them should be properly graded and promoted to positions for which they are fitted.

Also of concern is the tight locomotive and car situation. There is considerable difference of opinion within Government circles as to the proper amount of steel and other necessary materials which should be allocated to new construction and maintenance of cars and locomotives. During 1942 the railroads were required by the War Production Board to get along on far less new equipment and materials than they had requested. As a result there has been very little expansion of rail facilities since 1941, and there will be very little expansion in 1943 unless present allocations are increased.

THE Government has taken steps during the past year to restrict the use of the transportation system to the more essential tasks and to employ existing facilities, which are not likely to be expanded, as efficiently as possible. The tempo of control increased rapidly towards the end of 1942. In the motor field, the Office of Defense Transportation has issued general orders providing for: (1) The elimination of circuitry and the general conservation of equipment of common carriers; (2) a reduction of 25 percent in the mileage of vehicles operated in local delivery service; (3) the establishment of joint information offices to reduce empty mileage; (4) a 25-percent

cut in the mileage of contract and private carriers; (5) a mileage rationing program for trucks to be enforced by use of Certificates of War Necessity as a condition for continued operation (the effective date of this order has been postponed until January 31); and (6) a maximum speed limit of 35 miles per hour.

The orders as a whole, with the co-operative support of the trucking industry, have undoubtedly had considerable effect. Strict attention is being devoted to maintaining equipment in good condition. Trucking companies are loading vehicles heavily and reducing excess miles materially. Director Eastman estimates that truck mileage in 1942 was about 25 percent below the 1941 level. He hopes that the ODT orders will lead to still further reductions in truck mileage, stating that the cut must reach 40 percent "if all the trucks are to roll throughout the period of the gap in rubber supply." If this result is not achieved, or if the synthetic rubber production should not develop according to schedule, a system of priorities in the distribution of truck tires probably could not be avoided.

Gasoline and tire rationing have led to drastic reductions in the operation of private carriers in the eastern States. The inauguration of Nationwide gasoline rationing on December 1 is having a similar effect elsewhere and the periodic inspection of tires will promote better and longer use of equipment.

THE ODT has assured farmers that their truck transportation needs will be looked after. In a statement issued on December 1, farmers, stock raisers, and dairymen were told, "No farmer is to be put out of business as a result of the Office of Defense Transportation's Certificate of War Necessity plan. As long as the tires, spare parts, and gasoline are available, the ODT will help every farmer to get enough tires, spare parts, and gasoline

to carry on his necessary truck operations."

The statement announced an appeals procedure to correct any inadequacies in mileage and gasoline rations. Any farmer who was dissatisfied with the mileage and gasoline allowed in the Certificate of War Necessity was invited to take up the matter with his County Farm Transportation Committee. If the committee was convinced that the farmer was entitled to additional mileage, it was directed to make a suitable recommendation on behalf of the farmer to the ODT district office.

All ODT district offices were instructed by Washington to accept the recommendations of the County Farm Transportation Committees, unless they contained obvious errors. The local War Price and Rationing Board of the Office of Price Administration was to grant the farmer a gasoline ration in the amount provided for in the certificate as issued by the ODT district office. During the time the appeal is being carried on, the local War Price and Rationing Board is to grant the farmer a gasoline ration on his own statement of need, good until January 31.

Through misunderstanding, some farmers did not make application for their certificates by December 1, the original deadline for filing set by the ODT. These farmers had to go to their local War Price and Rationing Boards for gasoline. In some instances the rations obtained in this manner were not sufficient for their needs. In such event the farmers were permitted to make appeals in the usual manner through their County Farm Transportation Committees.

A farmer operating a passenger car and trailer is not required to obtain a Certificate of War Necessity. He is eligible, however, for a supplemental gasoline ration and should go to his County Farm Transportation Committee for assistance when he needs additional gasoline.

IN the rail field, ODT has issued a number of orders to improve efficiency. One of these is the requirement that refrigerator cars should be used only for products actually requiring protective service. The chief items of traffic barred from refrigerator car service as a result of this order are canned goods, beverages, and cheese. ODT has also required heavier loading of cars carrying less-than-carload merchandise. The railroads are also generally prohibited from accepting for shipment (with certain exceptions) freight cars not loaded to their rated capacity or their maximum practicable cubical content. The purpose is to conserve motive power and equipment. The effective date of the order, originally set for September 15, was postponed until November 1. The main argument

advanced against the order was the alleged danger of excessive damage to the freight. However, it is possible by the use of modern containers and methods to load cars heavily and safely.

If these measures, taken as a whole, do not effectively solve the transportation problem, the country will have to resort to more direct control of the movement of traffic. Territories may be zoned with a view of eliminating excessively long hauls of certain commodities; cross-hauling may be forbidden; eventually goods may move on priorities or permits. Powers with regard to domestic shipping priorities on commodities are vested in the War Production Board. Thus far these controls over traffic have not been invoked, but the signs are clear that change is imminent.

RALPH L. DEWEY.

Principles of Price Supports

THE Department of Agriculture has announced its policy will be to generally support prices for dairy and poultry products, meat animals, and for those food crops which are most essential for domestic consumption and foreign shipment at a level sufficient to assure producers of attractive returns for the desired production. This general policy will be carried out through specific loan, purchase, or other programs which will be announced as needed.

It is obligated by law to make available to cooperators under the Agricultural Adjustment Act of 1938, loans at 90 percent of parity on cotton, rice, tobacco, and peanuts and at not less than 85 percent of parity on corn (in the commercial area) and on wheat. The specific loan rates will be determined as of the 15th of the month preceding beginning of the marketing year.

The Department is also obligated, within the limits of funds available, to support at 90 percent of parity, prices of those commodities for which the

Secretary of Agriculture requests expanded production. These commodities up to the present include hogs, eggs, chickens (excluding broilers or chickens weighing less than three pounds live weight), turkeys, butter, cheese, dry skim milk, evaporated milk, specified varieties of dry peas and dry edible beans, soybeans for oil, flaxseed for oil, American-Egyptian cotton, and potatoes. Minimum price supports in terms of dollars-and-cents have also been announced for many of these commodities—and in many instances these are well above 90 percent of current parity prices. These are discussed in the commodity reviews.

PRICES of many commodities are at or close to ceiling levels as a result of exceptionally strong demand for almost all agricultural commodities—a demand which will continue to increase in 1943. For the same reason, prices of many commodities naturally will be above the announced support levels during the year ahead.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1935-39=100) ²	Cost of living (1935-39=100) ³	1910-14=100					Prices paid, interest, and taxes	Farm wage rates
				Whole-sale prices of all commodities ⁴	Prices paid by farmers for commodities used in—					
					Living	Production	Living and production			
1925	90	126	125	151	163	147	156	170	176	
1926	96	131	126	146	162	146	155	168	179	
1927	95	128	124	139	160	144	153	166	179	
1928	99	127	123	141	160	148	155	168	179	
1929	110	134	122	139	159	147	154	167	180	
1930	91	110	119	126	150	141	146	160	167	
1931	75	85	109	107	128	123	126	140	130	
1932	58	59	98	95	108	109	108	122	96	
1933	69	61	92	96	108	108	108	118	85	
1934	75	76	96	109	122	123	122	128	95	
1935	87	87	98	117	124	127	125	130	103	
1936	103	100	99	118	123	125	124	128	111	
1937	113	117	103	126	128	136	131	134	126	
1938	89	91	101	115	122	125	123	127	125	
1939	108	105	99	113	120	122	121	125	123	
1940	123	110	100	115	121	124	122	126	126	
1941	156	176	105	127	131	131	131	134	154	
1941—December	168	192	110	137	143	141	142	143	166	
1942—January	172	193	112	140	146	145	146	146	166	
February	172	201	113	141	147	147	147	147	167	
March	172	203	114	142	150	149	150	150	177	
April	174	212	115	144	152	149	151	151	167	
May	175	219	116	144	153	150	152	152	183	
June	176	226	116	144	154	150	152	152	202	
July	179	240	117	144	154	150	152	152	152	
August	183	244	118	145	155	150	153	153	153	
September	185	247	118	145	157	151	154	154	220	
October	188	259	119	146	158	151	155	155	155	
November	192	263	120	146	159	151	156	156	156	
December	194			159	153	153	156	156	156	

Year and month	Index of prices received by farmers (August 1909-July 1941=100)							Ratio, prices received to prices paid, interest, and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	
1925	157	177	172	153	141	153	163	92
1926	131	122	138	143	147	152	159	86
1927	128	128	144	121	149	155	144	84
1928	130	152	176	159	151	158	153	89
1929	120	144	141	149	156	157	162	87
1930	100	102	162	140	134	137	129	79
1931	63	63	98	117	92	108	100	62
1932	44	47	82	102	63	83	82	53
1933	62	64	74	105	60	82	75	59
1934	93	99	100	103	68	95	89	70
1935	103	101	91	125	117	108	117	83
1936	108	100	100	111	119	119	115	89
1937	126	95	122	123	132	124	111	90
1938	74	70	73	101	114	109	108	75
1939	72	73	77	105	110	104	94	74
1940	85	81	79	114	108	113	96	78
1941	96	113	92	144	144	131	122	91
1941—December	112	138	98	162	157	148	153	100
1942—January	119	143	102	204	164	148	147	102
February	121	150	98	161	173	147	135	99
March	122	151	111	136	180	144	130	97
April	120	168	118	188	190	142	131	99
May	120	159	131	152	189	143	134	100
June	116	153	148	169	191	141	137	99
July	115	155	131	200	193	144	145	101
August	115	151	126	256	200	151	156	107
September	119	156	129	191	195	156	166	107
October	117	158	134	226	200	165	173	110
November	117	160	127	238	197	171	178	109
December	124	162	151	293	196	175	183	115

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised November 1941. ³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5. ⁵ Revised.

⁶ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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A Brief Summary of Economic Conditions

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THE pace of war is speeded up, and with it, demands upon agriculture. Food production was expanded greatly last year. But it was impossible to expand production of crops and livestock as rapidly as production of mechanical weapons of war, or as rapidly as the growing demand for farm products. When the great victory drives in Europe and the Far East get underway, food production will become more and more important in relation to other war production. Food requirements will become acute with the liberation of all Axis-occupied territories. In preparation for the farmer's part in this new phase of the war, farm production goals have been increased above the levels announced in December. Farm machinery allocations have been raised. Incentive payments have been proposed for farmers who meet their goals for many of the crops most vitally needed. Deferment of essential farm workers has been ordered, and programs are being developed to help farmers get the labor they need. Farmers bear the heaviest responsibility they have yet known as they prepare now for spring planting. Upon their decision and action in the months ahead will depend much of the vigor of Allied fighting—and perhaps the lives of millions after victory has been won.

Commodity Reviews

PRICES: Forecast

Farm product prices for the full year 1943 may not average much above January levels, which were nearly 16 percent above the average for 1942. Prices received by farmers for their products averaged 157 percent of the 1909-14 level and 103 percent of parity in 1942, as compared to 91 percent of parity in 1941. By mid-December of 1942 they reached 114 percent of parity, in part because tobacco was selling well above parity and tobacco marketings were at a seasonal peak which increased the weighting given this commodity in the index of prices paid. A sharp upturn in truck crop prices was another important factor. The general index of prices received for all farm products averaged 178 percent of 1909-14 in mid-December, 157 for the full year 1942, and 122 in 1941.

The index of prices paid by farmers, including interest and taxes, averaged 152 percent of the 1909-14 level in 1942, rising to 156 in December. It averaged 134 in 1941. The parity price for each commodity rises and falls in exactly the same proportion as this index rises or falls, except for commodities on a post-war base. Parity prices for those commodities which have a 1919-29 base are tied to the index of prices paid on a 1919-29 base, which was 99 in mid-December and averaged 95 for the full year 1942. Parities for commodities which have a 1934-39 base are tied to the index of prices paid on a 1934-39 base, which was 126 in mid-December and averaged 122 for the full year. Prices received as a percentage of parity can be determined either by dividing the actual price by the parity price, or by dividing the index of prices received for any given commodity by the index of all prices paid by farmers, during the base period used for that commodity.

INCOME: Upward

Income from marketings of crops and livestock in 1943 may be 3 billion dollars greater than in 1942, if prices for the full year average about the same as in mid-January. However, the volume of feed purchased and the cost of labor and services will be higher than in 1942. Therefore, only a part of the increase in income will be available for family living, personal taxes and investment. Income from nearly all important farm products probably will be larger, with the biggest gains accompanying the greatest expansion in production—for example, hogs and poultry products. Goals call for a 12-percent increase in output of livestock products and a 5-percent increase in total agricultural production—assuming that crop yields per acre fall back to normal. Total cash farm income from marketings and Government payments is now tentatively estimated at 16.1 billion dollars in 1942, compared to 11.8 in 1941. Net income to farmers in 1942 is tentatively estimated at 10.2 billion dollars, compared to 6.7 in 1941.

LABOR: Tight Situation

Fewer workers were on farms January 1 than in any other month since 1925, when monthly records were begun. The number estimated, 8,171,000, was 116,000 below January 1942, 257,000 below January 1941, and 1,380,000 below December 1942. However, the supply of labor January 1, estimated at 56 percent of the 1935-39 average for the month, was slightly higher relative to the season than on October 1, when the index was only 54. Wage rates January 1 were 223 percent of the 1910-14 average—the second highest on record, exceeded only in 1920, and 3 points higher than on October 1, 1942. Completion of war

construction projects is reported to be easing farm labor scarcity in some local areas, because many workers apparently would rather return to farming than go into industrial plants further from their homes.

TAXES: Reminder

More farmers than ever before must file Federal income tax returns this year on 1942 income. Both farm income and the tax rates are the highest in history while personal exemptions and credits are the lowest. Returns must be filed by all those whose gross income is \$500 or more, if single or married and not living with husband or wife, and by those whose gross income is \$1,200 or more if married and living with husband or wife. A farmer counts as gross income all receipts from farm and from nonfarm sources, including the value of any merchandise received in exchange for farm products or services to others. Returns covering the calendar year 1942 must be filed with collectors of internal revenue on or before March 15, 1943. Forms can be obtained from the collectors and usually also from banks, post offices, and similar places.

Farmers who have not filed returns in the past will do well to get copies of the forms and start summarizing their 1942 operations immediately, especially if they have not systematically kept records on their business transactions. Those who have "kept books" of some sort will find the task much simplified. If books have not been kept the difficulties encountered in trying to remember the exact details of many transactions should make it clear that now is the best time to start a record for 1943 so as to be sure of having accurate and adequate information in the future.

FEED: Ceilings

Maximum prices for corn on all exchanges and in every cash and local market have been established generally at highest levels at which sales were made January 11. These levels

exceed 100 percent of parity when triple-A payments are included. Exempt from control are seed corn, popcorn, grain sorghums, sweet corn, broomcorn and local farmer-to-farmer sales of corn.

Mixed feeds for poultry and livestock have been under price ceilings since January 22. Ceiling price for each manufacturer and private brand dealer will be his cost of ingredients plus a margin based on his average mark-up over cost in specified months of 1942. A fixed mark-up of \$2.50 a ton over list price will be permitted for each wholesaler and \$7.50 a ton over list price for each retailer.

October-December disappearance of corn and oats was 16 percent above the same quarter in 1941, and the largest on record. However, stocks of these grains on hand January 1 were 9 percent greater than a year earlier. Wheat feeding increased sharply this winter. The corn carryover next October 1 is now expected to be about as large as last October 1.

Production of oilcake and meal during October-December 1942 was 18 percent larger than in the same period of 1941, and largest in history. However, livestock producers sought to buy more than was available. Mixers bought large quantities of high-protein feeds direct from crushers on a contract basis, leaving only small quantities available at wholesale markets.

Oilseed crushers in the Corn Belt are expected to continue at near-capacity production. Soybeans have been moving South as crushers there completed work on 1942 cottonseed. Total production of oilcake and meal will be further above normal next summer than it has been this winter.

Butterfat-feed and milk-feed price ratios are expected to remain above the 20-year average through the first half of 1943. A very favorable feed-egg price ratio is in prospect for the spring of 1943.

To further increase the supply of feed for livestock, goals for grain sorghums were raised to 12,000,000

acres, which is 23 percent more than the 9,755,000 acres planted in 1942. Under the proposed incentive payment program, farmers would receive \$8.00 an acre for each acre over 90 percent of the farm goal up to 110 percent.

In mid-January, the Office of Price Administration announced it would issue a regulation setting specific maximum prices for alfalfa hay.

HOGS: Slaughter

Inspected slaughter of hogs in 1942 totaled 53.9 million head, 16 percent above 1941 and slightly greater than the previous record in 1923. Inspected slaughter of 6.8 million head in December was the largest on record for any month.

CATTLE: Trends

Corn Belt stockmen were feeding a record number of cattle on January 1, 8 percent more than a year earlier. Increases, reported in all States but Minnesota, were greatest west of the Missouri River where corn supplies are back to predrought levels. Numbers on feed were also larger this year than last in North Dakota, Oklahoma, Texas, and Pennsylvania but smaller in all western States except California. The total for the western States is down 11 percent.

Feeders planned to market a smaller proportion of their cattle than last year in January and February, about the same proportion in March, and a larger share in April and later months. The cattle put on feed this year included a smaller proportion of heavy feeders (over 1,000 pounds), a larger proportion of medium feeders, about the same proportion of light weight cattle (under 750 pounds) and a smaller proportion of feeder calves.

For the first time since May, slaughter of cattle and calves in December was below the corresponding month a year earlier. Although production of beef and veal in 1942 was the greatest in history, the large number

of cattle now on farms and in feedlots is expected to result in still greater slaughter in 1943.

Total inspected slaughter in 1942 was 12.3 million head of cattle, 13 percent above the 1941 record; and 5.8 million calves, up 5 percent from 1941.

SHEEP: Feeding

On January 1, 1943, numbers of sheep and lambs on feed for market were 2 percent fewer than the record a year earlier. Estimate is 6,783,000 head this year compared with 1932-1941 average of 5,849,000. Numbers set a new record in South Dakota and Kansas, are second high in Nebraska, and increased in four of the other Corn Belt States. Increase of 8½ percent in the Corn Belt was more than offset by a decrease of 16 percent in other States. Numbers were down sharply in all feeding areas of Colorado. Total there, January 1, was down nearly 300,000 from last year, and fell below January 1 numbers in Nebraska and Kansas for the first time. Feeding was materially reduced also in Idaho, Wyoming, Utah, and Oregon.

Inspected slaughter in 1942 totaled 21.6 million head, 3.5 million larger than in 1941 and 4.0 million larger than the 1937-41 average. Cause was sale of many ewes and ewe lambs which ordinarily would have been retained for breeding stock. Lamb prices in early January were the highest since 1929.

DAIRYING: Prices

Action of the Department of Agriculture to increase production of corn and barley and to increase the supply of high-protein feeds available for immediate use will help dairy farmers produce the 122 billion pounds of milk requested in 1943. However, the general scarcity of labor and strong competition of hogs for available feed and labor, especially in the Midwest, will make it difficult to attain this goal unless the weather is unusually favorable.

Dealers' average buying price for standard grade Class I milk, 3.5 percent butterfat, was \$3 per hundred-weight for January—5 cents over December and the highest for any month since 1921. January retail prices, home delivery, averaged 14.46 cents a quart, highest for any month since early 1921. Federal subsidies, paid to distributors in the New York, Chicago, and Duluth-Superior markets to prevent increases in retail prices as a result of higher prices granted to producers, were discontinued December 31. The Office of Price Administration approved an increase in retail prices in the three markets until April 1.

OILSEEDS: New Goals

Acreage goals for two vegetable oil crops were substantially increased the latter part of January. The goal for flaxseed is now 5,500,000 acres, or 17 percent more than the 4,691,000 acres planted in 1942. The Department of Agriculture has proposed that farmers be paid \$10 for each acre over 90 percent of their flaxseed goal, up to 110 percent.

For soybeans the goal has been raised to 12,000,000 acres, which is 11 percent more than the 10,762,000 acres harvested for beans last year. Incentive payments of \$15 an acre to farmers on each acre over 90 percent of the farm goal, up to 110 percent have been proposed.

The goal for peanuts remains at 5,500,000 acres, which is 49 percent more than the 3,690,000 acres picked and threshed in 1942. Proposed incentive payments are \$30 for each acre between 90 percent and 110 percent of the farm goal.

WHEAT: Record Stocks

Sales of wheat for feed by the Commodity Credit Corporation at 85 percent of corn parity increased rapidly throughout January. From July 1 to January 30, sales totaled 85 million

bushels. In addition, during that period around 1½ million bushels of 1940-41 wheat under loan were redeemed by farmers at feed wheat prices.

Altogether, domestic disappearance of wheat promises to be the largest in history. Assuming continuation of moderate sized exports, the carryover next July 1 may be about 75 million bushels larger than the record carryover a year earlier. This is much less of an increase in carryover than seemed probable when it first became evident that the 1942 crop was the second largest in history.

Production in 1943 may possibly total about 850 million bushels. This is based on the December indication of a 625 million bushel winter wheat crop and an assumption that the spring crop will be about 225 million bushels.

Within a few days after the flour ceilings were raised, effective January 4, wheat prices at St. Louis reached the highest levels since 1928 and those at Kansas City the highest since May 1937.

Stocks of wheat in interior mills, elevators and warehouses January 1 were 235,221,000 bushels. Adding in wheat held on farms, combined stocks January 1 were 729,883,000 bushels—the greatest in 9 years of record. Combined stocks January 1, 1942 totaled 594,717,000 bushels and the 1935-41 average was 317,216,000 bushels.

RICE: Conservation

Rice millers were directed to set aside 60 percent of their stocks of milled rice on hand January 22, and 60 percent of rice milled after that date, for purchase by the Government. Purpose was to assure enough for residents of American Territories and for United States armed forces. Rice is a major food in the Caribbean area, and a staple food in Hawaii. The 40 percent of millers' supplies not covered by the order will be available to U. S. consumers, and for export to Cuba.

Stocks of rough rice on January 1 totaled 32,904,095 bushels or nearly half of the 1942 production. Stocks on January 1 last year were estimated at 28,354,484 bushels, or about 55 percent of 1941 production.

Total rough rice supplies in the 1942-43 marketing year are now indicated at 67 million bushels, consisting of a carry-over of 0.6 million bushels and a crop of 66.4 million bushels. Requirements for food use in the continental United States in 1941-42 were about 29 million bushels, compared with the 1935-39 average of 27 million bushels. Requirements to date this season have again been relatively large.

The average local price of rough rice in the U. S. was \$1.74 per bushel in mid-January.

Index Numbers of Prices Received and Paid by Farmers
[1910-14=100]

Year and month	Prices received	Prices paid interest and taxes	Buying power of farm products ¹
1942			
January.....	149	146	102
February.....	145	147	99
March.....	146	150	97
April.....	150	151	99
May.....	152	152	100
June.....	151	152	99
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	160	154	110
November.....	169	155	109
December.....	178	156	114
1943			
January.....	182	158	115

¹ Ratio of prices received to prices paid, interest and taxes.

² Revised.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average August 1906-July 1914	January 1910-14 (average)	January 1942	December 1942	January 1943	Parity price, January 1943
Wheat (bushel).....cents.	88.4	88.4	106.1	110.3	117.5	139.7
Corn (bushel).....do.	64.2	58.9	72.7	80.2	88.0	101.8
Oats (bushel).....do.	39.9	39.0	50.2	47.4	52.5	63.0
Rice (bushel).....do.	81.3	-----	¹ 157.4	162.4	174.2	128.5
Cotton (pound).....do.	12.4	12.2	16.93	19.55	19.74	19.59
Potatoes (bushel).....do.	69.7	64.2	97.6	111.8	117.5	113.8
Hay (ton).....dollars	11.87	11.87	10.15	10.46	11.20	18.75
Soybeans (bushel).....do.	-----	1.65	1.59	1.59	1.59	1.62
Peanuts (pound).....cents.	4.8	4.6	5.11	6.19	6.23	7.58
Peanuts for oil (pound).....do.	-----	4.07	8.97	8.97	8.97	8.71
Apples (bushel).....dollars	.06	1.00	1.16	1.43	1.60	1.62
Hogs (hundredweight).....do.	7.27	¹ 7.05	10.69	13.27	14.07	11.40
Beef cattle (hundredweight).....do.	5.42	¹ 5.23	9.72	11.43	11.78	8.56
Veal calves (hundredweight).....do.	6.75	¹ 6.78	12.03	13.14	13.80	10.66
Lambs (hundredweight).....do.	5.88	¹ 5.88	10.56	12.51	13.04	9.29
Butterfat (pound).....cents.	20.3	29.2	¹ 30.2	48.9	49.6	² 43.2
Milk, wholesale (100 pound).....dollars	1.00	1.84	² 2.65	³ 3.04	3.02	² 2.88
Chickens (pound).....cents.	11.4	10.8	17.0	20.5	22.1	18.0
Eggs (dozen).....do.	21.5	28.0	31.8	39.7	39.0	² 32.3
Wool (pound).....do.	18.3	18.5	¹ 37.1	39.7	39.5	28.9
Tobacco:						
Fire-cured-types 21-24 (pound) do.	¹ 13.6	-----	13.7	-----	16.4	13.6
Burley-type 81 (pound).....do.	¹ 22.2	-----	29.3	43.0	41.5	28.4
Maryland-type 32 (pound).....do.	¹ 22.9	-----	38.0	33.5	-----	22.9
Air cured (dark) type 35-36 (pound) do.	10.9	-----	12.5	13.2	15.6	10.9
Air cured (dark) type 37 (pound) do.	14.6	-----	18.5	21.0	21.0	14.6
Cigar filler type 41-44 (pound).....do.	-----	-----	11.4	-----	12.8	-----
Cigar binder type 51-56.....do.	-----	-----	14.5	24.0	16.8	-----

¹ Revised.

² Base price crop years 1910-23.

³ Adjusted for seasonality.

⁴ Base price crop years 1934-35.

FRUITS: Production

Production of oranges indicated February 1 was 82.4 million boxes, 2.1 million smaller than a year earlier. Indicated production in California is down 17 percent. The grapefruit crop is estimated at 46.9 million boxes, 16 percent larger than a year earlier.

The commercial apple crop was estimated at 127.7 million bushels in 1942—about 5 percent above 1941. Cold-storage holding of apples January 1 were 30.6 million bushels compared with 25.8 million for the same month a year earlier.

POULTRY: Demand

Commercial hatchery production in December reached an all-time high for the month, reflecting a strong demand from areas which specialize in producing young chickens for meat. Hatcheries reported 91 percent of December output was in heavy breeds. Advance orders for replacement purposes have been much larger this winter than last. The demand for chicks is expected to remain strong, because of the favorable egg-feed price ratio in prospect. The ratio this coming spring may be the most favorable on record. Hatcherymen in many sections intend to start operations earlier than usual this year. OPA in early January announced that sales of shell eggs for hatching are exempt from price control, to aid attainment of the poultry production goals.

Storage stocks of shell eggs January 1 were the smallest since 1933. Although holdings of frozen eggs were relatively large, combined stocks of eggs in storage were the smallest since 1933. Large quantities of both shell and frozen eggs were used by drying plants in the last few months of 1942. Egg production in coming months will be much larger than a year ago, but supplies for civilians probably will be no larger.

The cents-per-pound ceilings for chickens announced December 18 generally are higher than levels that pre-

valled under the temporary freeze order. Supplies of poultry in the next few months, though seasonally low, will be materially larger than a year earlier. Net withdrawals of poultry from storage began about 3 weeks earlier than usual this year. Holdings January 1 were about 10 percent smaller than a year earlier, but greater than average.

A strong demand for turkey poult is expected this year. Hatcheries reporting had 33 percent more poult on order January 1 this year than last.

VEGETABLES: Goal increases

Easy to store and to ship, dry beans are rich in protein and energy needed by fighting men. The same is true of dry peas. Because they are so well suited to wartime food needs, 1943 goals for dry beans were increased in January to 3,300,000 acres, which is 55 percent more than the 2,135,000 acres planted in 1942. And goals for dry peas were raised to 725,000 acres—a 45 percent increase from last year's 501,000 acres planted. In addition to increasing the support price from \$5.35 to \$5.60 for new crop U. S. No. 1 beans and from \$5.20 to \$5.45 for U. S. No. 2 beans, cleaned and in bags, f. o. b. country shipping points, the Department of Agriculture also proposes a payment of \$20.00 an acre for dry beans planted in excess of 90 percent of the individual farm goal, up to 110 percent of the goal. Loans will be made on uncleaned beans so that farmers can get immediate returns from the crop. Proposed payment for planting dry peas would be \$15.00 on each acre between 90 and 110 percent of the goals.

Goals for sweet potatoes were increased in January to 1,000,000 acres, which is 41 percent above the 707,000 acres harvested last year. As compared with 1941, the 1942 crop of sweet potatoes was 9 percent smaller in the Central States and one-fourth larger in the Central Atlantic and Lower Atlantic States. For Irish potatoes, the goals were increased to

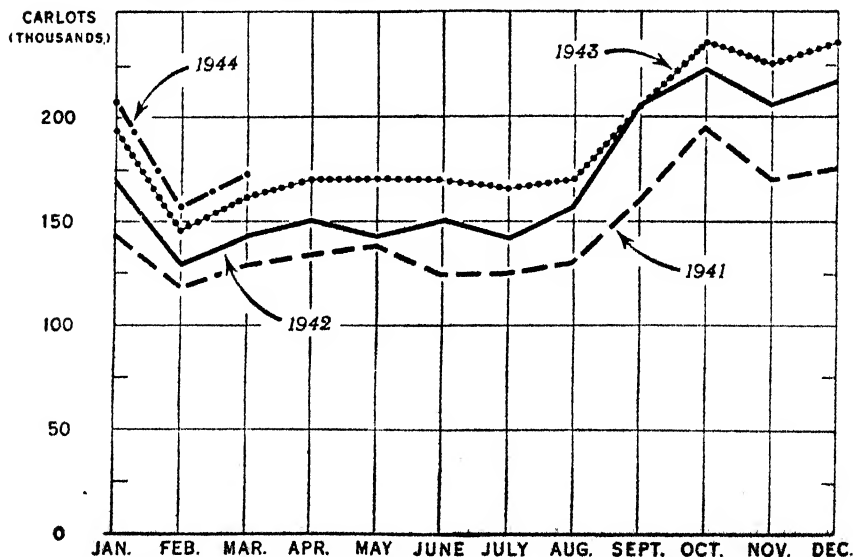
3,260,000 acres—17 percent more than the 2,793,000 acres planted in 1942. The Department of Agriculture proposes to pay farmers 50 cents a bushel on the normal yield of the acreage planted to potatoes after February 1 in excess of 90 percent of the individual farm goal, and up to 110 percent of the goal. It will also support potato prices at not less than 92 percent of parity. The proposed payment for planting sweetpotatoes is the same as for Irish potatoes. Reports received before this announcement indicated growers in the early, second early, and fall and winter States expected to harvest virtually the same acreage of Irish potatoes as they did last year, and 8 percent more than the 10-year average.

To encourage production of the more essential fresh vegetables, the Department of Agriculture will make a production payment averaging \$50 an acre for each acre of approved truck crops in excess of 90 percent and up to 110 percent of the truck crop goal.

Rail shipments of winter vegetables from January 3 to 16 were 32 percent above those of the preceding 2 weeks, but 10 percent below the corresponding period in 1942.

Onion stocks in the hands of growers and dealers January 1 were around 9 percent larger than a year earlier. Stocks of cabbage in the hands of growers and dealers January 1 were down 4 percent from a year earlier and about 3 percent below the 1932-41 average.

TRANSPORTATION LOADS FOR LIVESTOCK, ESTIMATED ON BASIS OF INDICATED MARKETINGS AND SHIPMENTS FROM PUBLIC MARKETS, UNITED STATES, JAN. 1941 - MAR. 1944



U. S. DEPARTMENT OF AGRICULTURE

BUREAU OF AGRICULTURAL ECONOMICS

Livestock transportation is normally heaviest in October when cattle and sheep are being moved from western ranges in largest numbers. Attainment of the 1943 production goals, with a resulting large increase in hog marketings, may make the transportation load for livestock next December about equal to that in October.

WARTIME FOOD DISTRIBUTION

TO develop recommendations for distribution of the wartime food supply will be among the major functions of the newly organized Food Distribution Administration.

Here are some of the things on which the FDA will make recommendations for action by Secretary Wickard.

- Allocation of food supplies among the three major groups—the armed forces, the civilian population, and our allies;
- Programs for conservation of foods and for participation in such programs by consumers, food industries, public eating places, etc.;
- Rationing of various commodities to assure equitable distribution of the quantities available;
- Programs designed to bring about economies in the distribution of farm and food products;
- Development of programs for efficient warehousing and transportation of food;
- Regulation of the distribution of materials needed for processing food-stuffs.
- Public feeding programs including school lunch, school milk and others as appear necessary in the war effort.

The carrying out of the programs resulting from these recommendations will be, in most instances other than consumer rationing, the responsibility of the Food Distribution Administration. Its other activities will be the performance of those wartime functions formerly conducted by the Agricultural Marketing Administration, the Food Division and other food units of the War Production Board, the Sugar Agency of the Agricultural Conservation and Adjustment Administration and those units of the Bureau of Animal Industry concerned primarily with regulatory work. The functions and personnel of these agencies have been absorbed by the FDA.

SOME of the work of the FDA is already well known, as it is a continuation of activities begun many years ago, such as the standardization, inspection and grading of farm products, the Nation-wide market news service, and the regulation of various phases of marketing farm products. All these functions owe their existence to the every day needs of agricultural marketing, needs that continue and which must keep pace with the demands of war.

More in the news at the present time are those which are a direct outgrowth of the national defense and war programs. The purchase of foods for our fighting allies is a job that was started in the spring of 1941. Under this assignment commodities have been sent abroad to keep those nations fighting the Axis, principally Britain and Russia, supplied with additional food they need to help finish the job of finishing Hitler. The quantities of food delivered for shipment have bulked large. Though more than 8 billion pounds have been shipped in the past 18 months, the foods that we have provided to our fighting allies have been but a small part of our expanded production. Less than one-half of 1 percent of the beef, veal, lamb, and mutton produced in 1942 went to them. They got only about 4 percent of our pack of the major canned fruits and vegetables, less than 1 percent of our increased butter output, about 13 percent of our pork, and less than 10 percent of our eggs.

In recent months, purchases by FDA have been at the rate of more than \$5,000,000 daily. These purchases have been not only for our Allies. Some of the food has gone to feed our people in Hawaii, and in Puerto Rico and the Virgin Islands. Some of it has gone to the Red Cross for feeding of war prisoners and war refugees. Other foods have been used here at home in school lunches and for

direct distribution through State relief agencies.

The school lunch and school milk programs are transforming millions of children into a reserve of health and strength upon which peace can be built. These programs are playing an important part in our war-food activity on the home front. At the peak in March of last year, more than 6 million children in 93,000 schools, participated in the community school lunch program. It is hoped that an even larger number can be reached this year with foodstuffs provided in large part by FDA. Largely as a result of increased national attention given to nutrition of students, approximately 3 million children are taking part this year in the school milk program. The number of participants has tripled over a year ago.

OTHER functions of the FDA are almost completely new to the experience of the Department—functions arising out of the global character of the war and the wartime food program. The job of making recommendations regarding the allocation of foods among the armed forces, the allies and the civilian population is one of these. As a necessary corollary, FDA has been given the job of determining nutritional standards, to serve as the scientific basis for such allocations. It will rely upon the cooperation of the agencies and organizations which have research functions in this field.

A major part of the line work, or operating responsibilities, is centered in the nine commodity branches—Cotton and Fiber—Dairy and Poultry—Fats and Oils—Fruit and Vegetables—Grain Products—Livestock and Meats—Special Commodities—Sugar—and Tobacco.

Each of these branches, for the commodities under their jurisdiction, will initiate and carry out programs dealing with wartime food problems, including regulatory work, distribution economies, purchase and price support.

These branches will cooperate with the Food Production Administration to obtain needed production on the farm; will develop and administer programs for production in processed form; and will cooperate in the administration of distribution programs including allocation, reservation, limitation, and conservation orders, and recommend rationing plans. In addition they will cooperate with the food industries in improvement of processing, packaging and distribution techniques, recommend allocations of materials needed for processing plants, initiate and execute procurement programs, diversion programs, marketing agreements, and will conduct marketing investigations.

Working with these commodity branches and other agencies of the government will be the Requirements and Allocations Control which will assemble and analyze information on production, supply and requirements, for the purpose of formulating the allocation of food among the various claimant agencies such as the armed forces, the allies and the civilian population. Allocations will be made by the Secretary after consultation with the Food Advisory Committee and the Combined Food Board.

THREE branches of FDA will deal with problems of food requirements and programs on the home front. To set up nutritional standards that will provide the best possible diets for civilians will be the principal job of the Civilian Requirements Branch. It will serve as the "claimant agency" for civilian needs, preparatory to allocations for the many war uses. Special dietary needs of industrial workers and others engaged in the war effort will be studied. Development of new foods will be investigated. Working with the Agricultural Research Administration and the Food Nutrition Board of the National Research Council, this branch will focus on the nutrition problem the resources of outstanding workers in the field rather

than undertake new research projects.

A Civilian Programs Branch will administer and expand the school lunch and school milk programs and other public feeding projects as they are developed. Involved will be the establishment of food reserves for civilian use in case of emergency. This Branch also will work with the Food Conservation Branch in seeking cooperation in wartime food programs.

Assisting in getting the maximum results in processing and handling the foods produced on farms are four branches set up to determine allocation of materials under the Controlled Materials Plan, to work with industry advisory committees on problems arising from the wartime food programs. The Facilities Branch will assist on such problems as plant conversion, new processes, new containers, and the handling of requests for priorities for materials and equipment. The Processors Branch will provide a central point for handling day-to-day problems in connection with organizing, managing, and servicing national food manufacturers' and processors' industrial advisory committees. The Wholesalers and Retailers Branch will bring into focus the problems of wholesalers, retailers, brokers, restaurants, and other

food distributors. Another branch will work with the various food industries in formulating programs for the most effective utilization of manpower.

IN working with representatives of the food industry, the Department has adopted the policy of requiring that all persons employed shall be on a full-time paid rather than dollar-a-year basis. A Consultants Panel is being set up, however, under which highly qualified personnel, not available on a salary basis, will be called upon for advice. These consultants will have no positions with administrative responsibility, and no procurement functions.

In all of its various operations the Food Distribution Administration will be guided by one motive—to make food serve its most effective role as a weapon of war. From the farms where food is produced to the plants where it is processed, and through the various channels of marketing to the ultimate consumers whether they be fighting men on the front of North Africa or youngsters in the neighborhood school, the FDA will do its utmost to keep the maximum quantity of food moving into most effective uses toward winning the war.

ROY F. HENDRICKSON, *Director,*
Food Distribution Administration.

Mexican Trade Agreement

A RECIPROCAL trade agreement to facilitate trade between Mexico and the United States during the emergency and provide an improved basis for post-war trade expansion was concluded on December 23 between the two countries. The agreement became effective on January 30 and will remain in force for 3 years, unless terminated sooner under specified conditions, and will be subject to termination thereafter on 6 months' notice by either government.

Mexico makes tariff concessions in

the agreement on various United States products imported into that country, in return for concessions by the United States on many important agricultural and industrial products imported from Mexico. Although most exports from the United States to Mexico usually are of manufactured and processed commodities, and imports from Mexico are largely of raw materials, many concessions contained in both Schedule I (covering imports into Mexico) and Schedule II (covering imports into the United States)

are on agricultural items. The value of imports into the United States from Mexico in 1939, for the 27 principal agricultural items on which the existing duty is reduced or bound against increase in the agreement, was \$8,030,000. Of this amount, \$4,697,000 was the value of imports of feeder cattle needed by farmers and ranchmen for stocking and feeding purposes. The value of imports from Mexico of the 15 agricultural items bound on the free list was \$20,006,000. The value of Mexican imports from the United States in 1939 of the 49 principal agricultural items on which the existing Mexican duty is reduced or bound against increase was \$3,924,000, and the import value of the one agricultural item bound on the free list was \$146,000.

Agricultural concessions granted by Mexico cover many items needed in its economy. Mexico must supplement its own production of agricultural commodities by imports, particularly of lard and oilseeds, dried fruit, hops, cottonseed, barley, condensed and evaporated milk, cigarettes, and certain types of tobacco, and wheat in years of low domestic yields. The United States normally supplies from 50 to 100 percent of these imports. The agreement covers concessions on these items as well as others less important in past trade. The average value in 1939 and 1940 of Mexican imports from the United States of selected agricultural items covered in the agreement was:

	1,000 dollars
Lard.....	803
Wheat.....	682
Tanned hides.....	478
Hops.....	411
Barley malt.....	271
Fresh fruit.....	152
Breeding cattle.....	143
Barley grain.....	118
Cottonseed.....	107
Meat products.....	102
Dried fruit.....	82
Tobacco.....	81
Stearic acid.....	79

THE Mexican duty of approximately 2.2 cents a pound on lard imported in tank cars and tankers, and the duty of approximately 3 cents a pound on lard in other containers are both reduced in the agreement by 22 percent. Most of Mexico's lard imports, which fluctuate around 20 million pounds a year, comes from the United States.

Important reductions are made on three dried fruit items, amounting to 37.5 percent on raisins, 50 percent on prunes, and 75 percent on sliced dried fruit of any kind. The duty reductions on fresh fruits are less, being 14 percent on apples, and 29 percent on plums, peaches, pears, grapes, and fresh fruit not specified. Mexico produces little dried fruit, most of its supplies coming from the United States. Imports of fresh fruit, however, supply considerably less than a tenth of total consumption.

Hops, cottonseed, and barley grain are valuable imports from the United States on which duty reductions are made; the duty on hops is reduced 29 percent; on cottonseed, 25 percent, and on barley grain, 20 percent. The duty on wheat is reduced 40 percent, from approximately 56 cents a bushel.

Other duty reductions on Mexican imports range from a 13 percent reduction on Virginia type tobacco to a 33.3 percent reduction on hulled oats and onions. They also include a 25 percent reduction on dried milk and unshelled walnuts, 20 percent on canned asparagus, canned vegetable foods, and shelled walnuts, and a 19 percent reduction on cereals.

Breeding cattle are bound on the Mexican free list, and concessions in the form of bindings of the existing duties are made on sausage, ham, bacon, canned meats, not specified, canned meat foods even when containing vegetables, fresh eggs, evaporated milk, butter, cheddar cheese, stearic acid in cakes, tanned hides, tomato sauce, canned tomatoes, canned fruits in syrup or in their own juice, wheat flour, unhulled oats, barley

malt, raw tobacco filler, cigarettes, fruit essences or synthetic products without alcohol, grape juice and fruit juice.

THE agricultural concessions made Mexico by the United States include duty reductions or bindings on cattle, fresh fruit, and vegetables, as well as bindings on the free list of the following more or less non-competitive agricultural items: bananas, coffee, crude guayule rubber, broomroot, henequen and sisal, tampico fiber, crude chicle, horses or mules for immediate slaughter, breeding cattle, sarsaparilla root, lime oil, lignaloe or bois de rose, pimento (allspice), anise, and candellila wax. Most of the products bound on the free list are not produced in the United States, and the difficulty of obtaining them from far away places makes Mexico a more strategic supply source than ever.

The United States import duty on all weights of cattle is reduced in the agreement to 1.5 cents a pound without quantitative restrictions during the national emergency. Thirty days after the termination of the emergency respecting cattle and meats, entries of cattle at this reduced rate will be subject to quota limitations as follows:

On cattle weighing less than	Head
200 pounds.....	100, 000
On cattle weighing between	
200 and 700 pounds.....	400, 000
On cattle weighing 700	
pounds or more.....	225, 000

Entries in excess of these quotas will be dutiable at 2.5 cents a pound. These quotas are the same as those imposed under the trade agreement with Canada on the light-weight and heavy-weight cattle. Quotas have not existed hitherto on imports of the intermediate or feeder cattle class. The new quota is set somewhat below the previous maximum imports of feeder cattle. This is the class of cattle that has been most important in our trade with Mexico. Of the total imports of cattle from that

country in 1939, valued at \$5,937,000, imports of feeder cattle needed by United States farmers and ranchmen for stocking and feeding amounted to \$4,697,000.

Removal of the quotas on cattle imports during the emergency when domestic supplies of meat are low may tend to somewhat alleviate the stringent supply situation here. When the emergency is past, the quota limitations on imports in all classes should protect farmers in the United States against any drastic increase in cattle imports.

NEXT to the duty reduction on cattle, the most important reduction from the standpoint of past trade value is on fresh tomatoes. Imports from Mexico in 1939 were valued at \$445,000. The general duty is reduced from 3 cents to 1.5 cents a pound during the emergency, to relieve pressing current food needs. Thirty days after the termination of the emergency respecting tomatoes the duty will automatically be increased to 2¼ cents a pound. The preferential rate to Cuba on tomatoes is, therefore, 1.2 cents a pound for the emergency and 1.8 cents thereafter.

Duty reductions ranging from 33 to 50 percent are granted by the United States to Mexico on beans (green or unripe other than limas) not specially provided for, black-eye cowpeas (dried or in brine), peas (green or unripe), chickpeas or garbanzos (dried), garlic, fresh peppers, and squash. Seasonal duty reductions are made on lima beans (green or unripe), fresh eggplant, and fresh cucumber; and the existing duty on each of these products is bound against increase for the rest of the year. The import value of all these vegetables combined from Mexico in 1939 was \$470,000.

In addition to the concessions on bananas, duty reductions on other fruit are made on fresh pineapples in bulk, limes, mangoes, watermelon, and edible berries except blueberries in various stages of preparation; and existing duties on pineapples in crates

and preserved and prepared guavas are bound against increase.

A 50 percent reduction is made in the duty on sheep and lambs, live asses and burros, mules valued at not more than \$150 (unless imported for immediate slaughter), dried blood albumen, and citrus fruit juice unfit for

beverage purposes. Additional bindings of existing duties are granted on vanilla beans, horses valued at not more than \$150 (unless imported for immediate slaughter), honey, and mixed feeds.

KATHRYN H. WYLIE,
Office of Foreign Agricultural Relations.

Nearby Cooperation for Victory

FARMER neighbors in peacetime helped out each other in meeting their peak needs for labor, machinery, and other supplies. And now in war time, when shortages of labor, machines, supplies, and transportation are arising on all sides, neighbor cooperation has a more important role in agriculture than ever before.

Neighborhood arrangements for labor vary according to the sizes of farms involved. Operators of large farms frequently obtain their seasonal labor from small farms nearby. Small farm operators under these conditions usually prefer to work for wages rather than to exchange labor, because they need cash income more than they do extra labor. A recent study in Frankfort community, Kans., illustrates this situation (table 1). The study shows that small farmers worked on other farms more than did large operators. Most of the larger operators confined their work to running their power

equipment on a custom basis, or to other jobs requiring special skills, such as mechanical work and carpentry. Because of the wartime drain of labor from the farms, most small farmers and their families are receiving higher wages than before the war for work on other farms.

EXCHANGE of labor for other labor is an important factor in farming operations of many areas. New interest now is being shown in exchange of workers between farms in all sections of the United States. In parts of the Peanut Belt, neighboring farmers are helping to provide the 8- to 12-man crews of peanut pickers, formerly furnished by the machine owners. More exchange work is being done in planting, harvesting, threshing and other types of activities.

Work needs differ for different systems of farming and the extent to which labor can be exchanged varies.

TABLE 1.—Joint Labor Arrangements on Farms of Different Sizes, Frankfort Community, Kans., 1940¹

Size of farm (acres)	Operators who worked for wages on other farms		Operators who exchanged work with other farmers		Operators who hired labor	
	Percent	Days worked	Percent	Days worked	Percent	Days worked
0—99.....	44	21	67	7	25	6
100—199.....	22	39	80	13	60	46
200—299.....	7	82	84	16	59	57
300—399.....	18	16	82	19	75	61
400—699.....	0	0	93	16	83	83
700 and more.....	0	0	83	7	86	122

¹ Unpublished data from study by Kansas Agricultural Experiment Station and Bureau of Agricultural Economics.

In areas where most farmers grow a single cash crop—such as cotton, peanuts, peaches, sugar beets, broom-corn or wheat—there is relatively little opportunity for farmers to swap labor. Although some exchange of help is possible for them, the peak labor demands of most farmers tend to occur at the same times, thus reducing the possibilities of mutual aid. Even here, however, planned variations in planting dates can broaden the opportunities. Also, variations in choice of times for key operations on adjoining farms—in threshing, seeding broomcorn and picking peanuts, for example—can sometimes be made without damage to the crops. Activities of this kind, wherever carried on, are helping farmers to achieve maximum production with use of available labor and equipment.

Communities that have several different types of farms, as in parts of the Corn Belt, the Central Basin of Tennessee and the Shenandoah Valley of Virginia, are in best position of all to exchange labor. Seasonal labor peaks of many of these farms come at differing periods, or can be made to do so. The farmers therefore are in good position to trade their work back and forth. In these areas, farmers frequently get most of their extra labor for filling silos, shocking feed, and other tasks, through

exchange of work with their neighbors.

Always there are some jobs needed that do not have to be finished at any particular time, such as building and repairing fences, farm butchering, sawing and hauling wood, cutting brush from pastures, building terrace outlets, and hauling gum. Many farmers are accustomed to working with their neighbors to speed up these tasks. Wider cooperation in work of this type unquestionably will be helpful.

As a response to war needs, exchange of hand labor for machinery services may soon be as widespread as direct labor exchange, extending the use of available machinery and labor. On some farms, and especially in the Southeast, time may be saved through exchanges of this kind, including shifts in the types of power and tools used (table 2).

Some farms are so small that the operators cannot afford to own binders, combines, tractors, or even two-horse equipment, and their incomes are so low that they cannot afford custom work. In many areas, greater efficiency for labor on the small farms is being obtained through exchange of the small farmers' labor for use of machinery from other farms. This procedure offers good returns to the

TABLE 2.—Labor Requirements for Old and Improved Practices for Selected Operations in the Southeast¹

Operation	Old practice		Improved practice		Labor saved by improved practice
	Implement and power	Labor required	Implement and power	Labor required	
		<i>Hours per acre</i>		<i>Hours per acre</i>	<i>Hours per acre</i>
Breaking land.....	2-mule turning plow ..	5	Tractor; plow.....	0.8	4.2
Planting cotton.....	1 or 2 mules; 1-row planter.	2	Tractor; 2-row planter.	.4	1.6
Cultivating (6 times over).	2-mule cultivator.....	8	Tractor; 2-row cultivator.	2.4	5.6
Plowing up peanuts.....	2 mules; 1-row peanut plow.	2	Tractor; 1-row peanut plow.	1.0	1.0
Shacking and stacking peanuts.	Hand labor.....	35	Tractor; side-delivery rake, stacked with forks.	8.0	27.0
Binding grain.....	3 mules; binder.....	1	Tractor; binder.....	.5	.5

Based on studies made by Georgia and Alabama Experiment Stations in cooperation with Bureau of Agricultural Economics.

farmers involved. It is particularly suited to the needs of areas where there are large farms with adequate machinery that need labor, near to small farms that need machinery but have excess labor. Fair wage rates and rates for machinery services should be established to expedite such exchange. Groups of farmers in each community might well get together and work out fair rates of wages, machinery hire, and exchange bases. Farmer groups also often can help to work out definite schedules of machinery operations in a locality, to assure best use of available machinery, with profit to all.

THAT labor-machinery exchange works is shown by the experience of a farmer in Terrell County, Ga. This farmer used his side delivery rake in harvesting some of his neighbor's peanuts, receiving in return necessary man-labor to stack his own peanuts with forks. In the trade, labor was valued at the rate of \$1 a day, and the use of his machinery was valued at 40 cents per hour, plus fuel for the tractor. By the exchange, labor per acre to harvest the crop was reduced from about 35 hours to 8 hours.

Further illustration is given in a trade made by two neighboring farmers in the Wheat Belt. Both needed additional labor for their 1942 harvest. Also, one needed a combine and the other a truck although they had these between them. By pooling their labor and equipment they harvested their crops with little difficulty. This would not have been possible without the exchange.

In addition to these types of cooperation in use of machinery, many farmers have obtained necessary machinery through buying it jointly with other farmers. Group purchase and use is especially advantageous during wartime and for farmers whose farms are too small to permit full-time use of power equipment.

NOT alone in exchange of labor and equipment, however, is cooperation between farmers successful and desirable. In this time of national emergency, when best use of all farm resources is basically essential, still other avenues of cooperation are called for. Some farmers may find it desirable to work out exchanges of labor for the use of good land, to assure maximum efficient production and higher earnings to farmers generally.

Thousands of communities have farms on poor land, as well as on good land. More labor, of course, is required on the poor land, in proportion to output, than on the good land. If any considerable part of the good land is permitted to lie idle because of labor or equipment shortage while poorland is being cultivated, there is a waste of productive resources. In these cases, some of the farmers on poor land and those on good land may need to arrange for retirement or less intensive use of the poor land and for cultivation of the more productive soils.

For this purpose, a simple trade might be developed, based upon the share rent system of farming. On this basis, the farmer with the poorer land might rent the better land, retire his own, and farm the better land on crop share basis. The operator of the poorer farm might need to be compensated in some way, of course, for retiring his own cropland and making the change. This could be done perhaps by the owner of the good land paying the other farmer an inducement payment, in addition to a share of the crop, which would equal the taxes on the poorer land or by the owner allowing him the use of certain key items of equipment which would improve his efficiency. In some instances, part of the poorer farm's soil might be very productive and where the farms are nearby it might be desirable for the operator to continue to cultivate any highly productive land on the poorer farm. Trades of

this kind would avoid need for maintaining excess mules and equipment on poor farms.

NEBHOR cooperation in meeting feed and livestock problems is another aid to wartime production. Some farms are producing livestock and livestock products beyond their capacity to supply necessary feed. On the other hand, some farms are producing a surplus of certain feeds. When these conditions exist side by side in an area, some kind of exchange can usually be worked out that will be profitable to both parties. For example, many livestock farmers already trade surplus grain for the surplus hay of their neighbors. These trades, in addition to helping the farmers involved, conserve transportation, labor in handling, and storage—valuable war resources.

Cooperation in provision of sire service for breeding animals was frequent, even before the war. Now, however, many small farmers are entering the livestock field. Usually they are unwilling to pay for the services of good sires, with the result that poor

stock is produced. Wider development of cooperative ownership of sires would lead to better war production and greater profits for these farmers.

MARKETING and transportation difficulties also are open to attack through neighborhood action. Many farm communities work together to insure full truckloads to market, by posting local notices or otherwise exchanging information between farmers. Some of them designate local assembly points, where farmers take their goods for loading into larger trucks and most farmers alternate with others in using their automobiles and trucks for trips to town. Joint collection of milk, eggs, and other produce are growing in importance.

Some communities, of course, have developed the cooperative type of relationship more than have others. Where these relationships are now firmly established, the work now being done can prove a serviceable guide to other communities.

CHARLES P. BUTLER,
Bureau of Agricultural Economics.

Crop Yields in 1943

THE volume of crops that will be produced in 1943 and the kind of food that we will have on our tables a year hence will depend in large measure on how much the crops yield per acre. Some guesses or assumptions as to the yields per acre that may be expected are, therefore, important in laying plans for the future.

JUDGING from the frequency of favorable crop seasons in past years the chances that the crop yields of 1943 will average as high as the outstandingly high yields secured in 1942 do not seem better than perhaps 5 out of 100. On the other hand, the chances of securing yields equaling or exceeding the 1937-41 average (117 percent of the pre-drought average) would

seem to be fairly good, perhaps 50 or 60 out of 100. If it is assumed that there are equal chances that the weather of 1943 will resemble any one of the years for which we have records, then we must make allowance for the fact that about 1 year out of 7 has been dry enough to materially reduce crops in the United States. The tendency in estimating crops, however, is to lean heavily on results in recent years, not merely because those years are remembered best or because so many conditions are changing but because the weather seems to have certain "habits" which are not fully understood but may need to be allowed for. Thus, during the 1930-39 period there were so many dry seasons and so much hot summer weather in

the Central States that for several years it seemed necessary to be conservative in estimating prospects. The droughts also had cumulative effects, for in a number of States they caused progressive depletion of subsoil moisture, feed reserves, and range cover as well as of financial resources of the farmers. Now that there have been several favorable seasons in succession some of those watching the weather records are inclined to look back at the predominance of favorable crop years in States east of the Rockies during the 1896-1910 period which followed the frequent droughts of the preceding 10 years. Weather mathematicians who 9 years ago timed the return to a period of more adequate rainfall would probably see in the change further evidence of a vague and uncertain tendency for similar weather conditions to be repeated at irregular intervals of about 35 years as mentioned by Sir Francis Bacon before 1625 and charted by Bruckner in 1890. But whatever the method of calculation followed, the danger of an immediate return of disastrous droughts appears to be fading. There seems no reason now to assume that weather conditions in 1943 will be as unfavorable as they were during the exceptionally dry 1930-39 period when average yields of 6 crops (corn, wheat, oats, barley, flaxseed, and hay) covering three-fourths of our crop acreage were each lower than the average in any of the three previous decades.

LOOKING back at the 1930-39 period it is apparent now that while the low prices that prevailed during the depression years lessened the quantity of fertilizer used and caused other changes, the low yields of the period were due primarily to the succession of droughts. These were particularly severe in the Great Plains area where there has now been a marked change. During each of the last 2 crop years the 10 States extending into the area have had

roughly 40 percent more precipitation than the average during the preceding 7 seasons, and the present favorable moisture conditions in these States and in the northern half of the area west of the Rockies materially improve prospects for the small grain crops of 1943. The larger reserves of subsoil moisture should also help to lessen the losses of other crops during such short periods of drought as may occur. In the eastern half of the country, where losses from excessive rain average about as large as those from drought, there appear to be about equal chances that weather conditions affecting crops in 1943 will be better or worse than average.

ASIDE from irregular changes due to the weather, the yields of most crops have shown an upward trend during recent years. These trends can best be seen by using the reports received from crop correspondents on the "condition" of the various crops at about harvest time as though they provided a true measure of weather influences and related factors such as insect pests, floods, and the like. Thus, as a basis for comparison, if correspondents report the condition of a crop as 50 percent of normal and the yield turns out to be 20 bushels per acre it may be assumed that with "100 percent normal" or nearly ideal weather the yield

would have been about $\frac{20 \times 100}{50}$ or

40 bushels per acre. The "normal yields" computed in this way sometimes need to be adjusted for subsequent harvesting losses, abandonment, or regional shifts in the areas of production but, on the whole, they show marked stability from year to year and indicate the principal changes in crop yields that took place as a result of influences other than weather. For each crop they tell an interesting and revealing story.

IN the case of corn the "normal yield" per acre harvested, as thus computed, averaged close to 34.7 for each of the 3 ten-year periods beginning 1900, 1910, and 1920. It showed no tendency to rise till hybrid seed corn began to be important, but since 1937 the increase has been nearly a bushel per year, the indicated normal reaching 37.5 in 1939, 38.4 in 1940, 38.5 in 1941 and 40.8 in 1942. The increases in "normal yield" have occurred almost entirely in States where the use of hybrid corn has been increasing and the United States average may be expected to continue to rise gradually for some years as hybrids are introduced into new areas and as better hybrids are developed. In 1943 about half the corn acreage will be planted with hybrid seed and we may expect the United States "normal yield" for corn to be about 41 bushels per acre. If weather conditions are no better or worse than average we may expect an October condition of about 75 percent of normal, indicating a "probable yield" of about 30.8 bushels per acre harvested. This would be much below the record 35.5 bushel average of 1942 and below the 31.1 bushels harvested in 1941 but it would be above the yields in any earlier years except 1905 and 1906.

The 30.8 bushel "probable yield" indicated by this method of calculation is not really a forecast of what the yield will be but merely a midpoint to measure from. Judging from variations in the reported condition in past years there would appear to be about 1 chance in 4 that the yield will be below 28, and 1 chance in 4 that it will be above 32. Labor conditions may somewhat increase harvesting losses this year but after allowing for seed improvement, regional shifts in acreage, changes in fertilizer tonnage and composition, etc., the net effect of all such new developments this season seems likely to be unimportant as compared with the amount and distribution of the rainfall next summer in the Corn Belt States.

THE unprecedented wheat yield of 19.8 bushels per acre in 1942 was primarily the result of the exceptionally heavy rainfall in the Great Plains States where 70 percent of the crop was produced. While conditions have continued highly favorable in many States a repetition of last season's bumper yield seems only a remote probability. Wheat yields have been rising for several years but previously they were depressed by hot, dry seasons following expansion of acreage in the areas of low rainfall. Ten-year averages of yields per acre harvested, after rising from 12.5 in 1870-79 to 14.4 in 1900-09 declined gradually to 13.3 in 1930-39. Adjustments for weather conditions, however, show "normal yield" increasing more than a bushel each decade, rising from 13.2 in 1870-79 to 20.6 in 1930-39. This is an increase of 7.4 bushels in 60 years, but part of this may be due to more adequate allowance for abandonment. In recent years the tendency for yields to rise has been noticeable chiefly in the Pacific Northwest where yields are affected by relative acreage of winter and spring wheat and by changes in the proportion of the acreage seeded on cultivated summer fallow or on irrigated land. Moisture conditions are now very favorable in most of the Great Plains States and in the Pacific Northwest and the condition of winter wheat, as reported December 1, 1942, indicates a yield of 16.7 bushels per seeded acre. The good condition of winter wheat suggests that moisture is likely to be favorable for seeding spring wheat in the same States and a yield of 13 bushels per acre sown would seem a fair prospect. Putting together these indications and allowing for some abandonment suggests an all-wheat yield of about 16.6 bushels per acre as finally harvested.

YIELDS of oats, barley, rye and hay crops, like wheat, declined for some years prior to 1937 but apparently only because of adverse weather. Other factors are tending to raise yields.

"Normal yields" of oats have been increasing gradually for half a century. Recently most of the increases of significance have been in the West but some of the promising new varieties being introduced seem likely to cause a renewal of the upward yield trend in several North Central States. With average weather in 1943 the oats yield is likely to be around 32 bushels per acre harvested, or close to the average during the last 6 years.

The yield of tame hay crops in 1943 will depend largely on the rainfall next summer but, with average weather, it should average about 1.3 tons per acre, which would be not far from the average during the last 60 years. Recently the trend of yields per acre, aside from irregularities due to the weather, have been upward in most States from New York and Kentucky westward to Minnesota and Missouri. In this area the acreage of alfalfa and other high-yielding kinds of hay has been increasing. In the Dakotas, Nebraska, and Kansas where droughts reduced alfalfa from 3,241,000 acres in 1927 to 1,185,000 acres in 1939 the acreage was back nearly to 2 million by 1942. This is already helping to raise hay yields per acre. With a further increase of alfalfa probable in 1943 and subsoil moisture reserves back to normal in most areas, prospects for a good yield of hay crops in these states appear favorable. On

the other hand, increases in the acreage of peanuts harvested for both nuts and hay tend to increase hay production in peanut growing States but add more acres than tons to the hay totals, causing an apparent reduction in the average yield of hay per acre.

SORGHUMS are so largely grown in areas of light and uncertain rainfall that acreages and yields vary widely from season to season. The recent development of improved varieties, particularly those suitable for harvesting with a combine is helping to increase the acreage harvested for grain but there are no indications yet that the average yield is increasing. Allowing for usual difficulties as a result of local droughts it seems best not to count on a yield of more than about 14.3 bushels from the acreage harvested as grain. This seems low in comparison with yields of 18.7 and 18.2 in the last two seasons but yields higher than 14.3 were harvested in only 2 of the preceding 10 years.

COTTON yields declined from an average of 192 pounds of lint per acre during the 1890-99 decade to 162 pounds during the 1920-29 decade, due chiefly to the spread of the cotton boll weevil. Since 1930 the yields have been better and during the last 5 years they have ranged from 236 pounds in 1938 to the new peak of 275

Crop Yields per Acre, Past and Prospective. United States Averages for All Acreage Harvested

	All corn	All wheat	Oats	Barley	Tame hay	Cotton	Soy- beans	Beans	Pota- toes	Tobacco	28 crops percent of 1923-32 average
	Bu.	Bu.	Bu.	Bu.	Tons	Lb.	Bu.	Lb.	Bu.	Lb.	
1880-99.....	25.9	13.4	27.5	23.7	1.25	182	-----	-----	82.5	732	-----
1900-1919.....	26.6	14.3	29.9	23.2	1.31	185	-----	-----	96	818	-----
1920-29.....	26.8	14.0	29.7	22.7	1.32	163	-----	665	111	772	100.6
1930-36.....	21.4	13.1	28.1	19.9	1.19	187	14.6	729	108	806	94.2
1937-41.....	29.0	14.6	31.6	23.3	1.39	246	18.7	917	126	940	117.5
1942.....	35.5	19.8	35.9	26.4	1.53	275	19.5	995	137	1,027	136.7
Prospective 1943 with average weather ¹	30.8	16.6	32.0	23.3	1.3	250	17.8	875	130	890	120.0

¹ Prospects as of mid-January 1943, prior to announcement of Food Production order No. 5 governing uses of fertilizer. Estimates subject to change as season progresses.

pounds reached in 1942 when weather conditions were favorable in practically all of the important producing states. The tendency towards liberal use of fertilizers, characteristic of the last several years, will probably continue into 1943 to the extent that supplies are available. There would seem some justification for expecting the yield to be somewhere around the 250 pound average of the last 6 years rather than near the 200 pound level that would appear indicated by the assumption that weather, boll weevil infestation and other factors will be no more favorable than the average during the last 20 years.

YIELDS of potatoes, beans, soybeans, rice, tobacco, and various other crops have been increasing and prospects are for high yields if the weather continues to be favorable. The causes of the increases are various but include the growing of improved varieties, use of better methods of production and increased concentration of production in the highest yielding areas. Fifty years ago, when potatoes were grown mostly in small patches by hand methods, the yield averaged about 82 bushels per acre. In 1943 equally good weather would result in a yield of about 130 bushels per acre, for a substantial proportion of the acreage will be concentrated on farms specializing in this crop and using intensive methods such as close planting, liberal use of fertilizers and spraying to control diseases. Potato growers as a group are in the lead in the use of improved seed and the 1942 production of certified seed potatoes is sufficient to plant about two-thirds of the total acreage of potatoes in prospect for 1943. The yield of dry edible beans has been rising in all important States and the acreage grown has increased materially in California and Idaho where yields are high. Instead of a United States average of 11 bushels per acre expected with average weather 15 to 20 years ago, yields during the last 6 years have averaged over 15

bushels per acre and with even average weather in 1943 a yield of 14½ to 15 bushels may be expected unless it becomes necessary to materially expand the acreage in some of the low-yielding areas such as the pinto bean areas of the Southwest. The United States average yield of soybeans has increased about 50 percent during the last 15 years as a result of extensive changes in the varieties grown, changes in the method of production and a great expansion of the acreage in the high-yielding Central Corn Belt States. Average weather in 1943 should permit a yield of perhaps 17.8 bushels per acre.

RICE yields during the past 10 years have been nearly 60 percent above those harvested 40 years ago but with current expansion of the rice acreage to meet wartime requirements yields may be reduced temporarily by use of poorer land. Tobacco yields have recently been on a new high level, due chiefly to closer setting, liberal fertilization, and good care. With just average weather, the yield next year should be nearly 1,000 pounds per acre which would be above the yield in any past years except 1940 and 1942, and 200 pounds above the average yield during the last 50 years.

FRUIT production per acre has been rising for a long period. An increasing proportion of the orange and grapefruit groves are now approaching the age of full production and the gradual dying out of the older farm orchards of apples, pears, and peaches has eliminated most of the low-yielding fruit acreage. Trees and vines now remaining in production are largely in specialized fruit belts where yields per acre are high. In addition to increased yields per acre of the individual fruits the aggregate tonnage of all fruit per acre has been raised by the gradual substitution of the heavy yielding citrus fruits for the lower yielding deciduous fruits. Taking all tree and vine fruits together (except noncom-

mercial apples) the yield per acre has recently been above 4 tons per acre compared with about 2½ tons per acre 20 years ago. The continued heavy production of oranges, grapefruit, and lemons may be interrupted in any year by freezes severe enough to injure the trees, but present prospects for 1943 are for citrus fruits as a group to yield about 7 tons per acre of bearing age as compared with the 1920-29 average of 5.3 tons. Other tree and vine fruits should yield more than 3 tons per acre compared with the 1920-29 average of 2.1 tons.

The gross tonnage yield of commercial vegetables in 1942 was about 3.55 tons per acre, slightly higher than in any of the dozen previous years. Unusually favorable weather, liberal use of fertilizers, and stimulating prices apparently offset the labor difficulties

encountered in 1942 but it seems questionable if this will be true in 1943.

CONSIDERING all important crops except vegetables and all conditions now in sight which affect yield prospects for this season, there appears to be no development as yet which would prevent crop yields from going as high as they did in 1942 or from falling as low as in some of the drought years. But if weather influences are average, as compared with all past years for which we have records, the prospect is for crop yields to be about 12 percent below those of 1942, about 20 percent above the 1923-32 or pre-drought level, and 2 percent above the average during the 5 relatively favorable seasons 1937-41.

JOHN B. SHEPARD,
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War Units Plan

WAR unit values which have been given to all crops and livestock products important to the war effort are shown in the accompanying table. The number of war units produced in 1943 by a farm worker will be considered by local Selective Service Boards in determining his eligibility for deferment; and they will be considered by Department of Agriculture County War Boards in allocating scarce production supplies.

One war unit is the number of crop acres or the number of livestock that require approximately the same amount of labor (excluding seasonal peaks) as is necessary to keep one dairy cow.

As a national average, each regularly employed farm operator or worker should be able to produce 16 war units, if he has sufficient land and other resources. Inasmuch as many

farms are not now equipped to produce as much as 16 war units, however, Selective Service Regulations have suggested 8 war units as a floor for deferment purposes. On many farms, one worker can produce much more than 16 war units.

ONLY the labor of regularly employed workers performed directly on a particular crop or class of livestock is included in assigning war unit values. Labor hired seasonally for harvesting, for example, is not included. A farmer who bought all his feed would need 16 milk cows to have 16 war units on his farm, but a farmer who has 20 acres of corn (4 war units), 30 acres of oats (2 war units), and 20 acres of nonirrigated alfalfa hay (2 war units) would need only 8 cows to have a total of 16 war units on his farm.

War Unit Conservation Factors for Farm Products

Livestock and livestock products

	Number of animals or acres equal to one war unit
Beef cattle:	
Farm herds.....	10
Feedlot.....	20
Range.....	15
Stocker (bought and run on grass or grazed in fields).....	75
Dairy cattle:	
Milk cow.....	1
Other dairy cattle and calves.....	10
Hogs:	
Sows to farrow, spring.....	3
Sows to farrow, fall.....	3
Feeder pigs (bought and sold during year).....	30
Poultry:	
Broilers and ducks for market.....	600
Hens, laying pullets, and ducks for egg production.....	75
Flock replacement.....	300
Turkeys and geese.....	40
Sheep and goats:	
Farm flocks.....	30
Lambs in feedlot.....	160
Range sheep and goats.....	45
Milk goats.....	3
Stockers (bought and run on grass or grazed in fields).....	100

Crops

Fiber, oil crops, and potatoes:	
Castor beans.....	3
Cotton: American-Egyptian, Sea Island and Upland 1½ inch and over.....	1.5
Upland under 1½ inch.....	3
Flaxseed and soybeans.....	12
Hemp.....	5
Peanuts, Irish potatoes and sweet- potatoes.....	2
Field crops:	
Alfalfa hay (irrigated), broom corn, corn for grain and silage, dry edible beans, green peas for processing, rice, sweet corn for processing.....	6
Alfalfa hay seed, cover crop seed, non- irrigated alfalfa hay, grain sorghum, other tame hay and seed.....	10
Barley, dry field peas, oats and rye.....	15
Sweet corn for fresh consumption and hybrid seed corn.....	3
Wild or native hay.....	30
Wheat.....	20
Fruits:	
Plants and trees for fruit production re- placement and camouflage.....	10
Small fruit and berries: Blackberries, blueberries (tame), boysenberries, cranberries, currants, dewberries, gooseberries, grapes, loganberries, rasp- berries, strawberries, and young- berries.....	0.7

Crops—Continued

	Number of animals or acres equal to one war unit
Fruits—Continued.	
Tree fruit (deciduous and citrus):	
Bearing orchard (irrigated).....	1
Bearing orchard (nonirrigated).....	2
Nonbearing orchard.....	5
Medicinal, insecticide and rubber plants:	
Aconite, belladonna, digitals, henbane, pyrethrum, guayule, and Kok-saghyz.....	0.4
Wood products:	
Logs delivered to local mill (includes piling), board feet.....	10,000
Logs sawed in sawmill (on farm or nearby), board feet.....	5,000
Hewn railroad ties, number.....	200
Fence posts, number.....	500
Pulpwood, fuelwood, bolts for excel- sor, handles, etc., cords.....	15
Naval stores, faces.....	200
Vegetables for fresh consumption and processing:	
Asparagus (from present plantings), beets, broccoli, brussels sprouts, cab- bage, carrots, chard, cauliflower, col- lards, escarole, green leafy lettuce, green pascal celery, green peas for fresh consumption only, peppers, kale, lima beans, mustard greens, onions, pars- nips, rutabaga, snap beans, spinach, tomatoes, and turnips.....	1
Vegetable plants and seeds.....	0.7
Other food and special crops:	
Honey, colonies.....	25
Tree nuts (bearing orchards):	
(a) Almonds, filberts, and walnuts.....	2
(b) Pecans (tame) and tung.....	5
Tree nuts (nonbearing orchards and re- placement stock).....	15
Sugar cane for sugar and syrup.....	1
Sugar beets, sugar beet seed, sorghum and sorgo syrup.....	2
Tobacco.....	0.5

No war unit credits

Special crops:	
Cantaloupes.....	
Hops.....	
Popcorn.....	
Watermelons.....	
Vegetables:	
Artichokes, celery (bleached), eggplant, and lettuce (Iceberg).....	
Kohlrabi, cucumbers, horseradish, okra, radishes, and rhubarb.....	
Garlic and leeks.....	
Squash and pumpkins.....	
Other crops not listed.	

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935- 39=100) ¹	Income of industrial workers (1935- 39=100) ²	Cost of living (1935- 39=100) ³	1910-14=100					Farm wage rates
				Whole- sale prices of all com- modities ⁴	Prices paid by farmers for commodities used in—			Prices paid, interest, and taxes	
					Living	Production	Living and pro- duction		
1926	96	131	126	146	162	146	155	168	179
1927	95	128	124	139	160	144	153	166	176
1928	99	127	123	141	160	148	155	168	178
1929	110	134	122	139	159	147	154	167	180
1930	91	110	119	128	150	141	146	160	167
1931	75	85	109	107	128	123	126	140	130
1932	58	59	98	95	108	109	108	122	96
1933	69	61	92	96	108	108	108	118	85
1934	75	76	96	100	122	123	122	128	95
1935	87	87	98	117	124	127	125	130	103
1936	103	100	99	118	123	125	124	128	111
1937	113	117	103	128	128	136	131	134	126
1938	89	91	101	115	122	125	123	127	125
1939	108	105	99	113	120	122	121	125	123
1940	123	119	100	115	121	124	122	126	126
1941	156	166	105	127	131	131	131	134	154
1942	180	232	116	144	154	150	152	152	201
1942—January	172	203	112	140	146	145	146	146	166
February	172	201	113	141	147	147	147	147	167
March	172	203	114	142	150	149	150	150	167
April	174	212	115	144	152	149	151	151	177
May	175	219	116	144	153	150	152	152	183
June	176	226	116	144	154	150	152	152	183
July	179	240	117	144	154	150	152	152	202
August	183	244	118	145	155	150	153	152	202
September	185	247	118	145	157	151	154	153	202
October	188	250	119	146	158	151	155	154	220
November	¹ 194	² 265	120	146	159	151	156	155	220
December	196	272	120	147	159	153	³ 158	⁴ 156	223
1943—January							160	158	223

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio, prices received to prices paid, interest, and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	
1926	131	122	139	143	147	152	159	145
1927	128	128	144	121	149	155	144	139
1928	130	152	176	159	151	158	183	149
1929	120	144	141	149	156	157	162	146
1930	100	102	162	140	134	137	129	128
1931	63	63	98	117	92	108	100	87
1932	44	47	82	102	63	83	82	65
1933	62	64	74	105	60	82	75	70
1934	93	99	100	103	68	95	89	90
1935	103	101	91	125	117	108	117	108
1936	108	100	100	111	119	119	115	114
1937	126	95	122	123	132	124	111	121
1938	74	70	73	101	114	109	108	95
1939	72	73	77	105	110	104	94	92
1940	85	81	79	114	108	113	96	98
1941	96	113	92	144	144	131	122	122
1942	119	155	125	199	189	182	151	157
1942—January	119	143	102	204	184	148	147	149
February	121	150	98	181	173	147	135	145
March	122	151	111	136	180	144	130	146
April	120	158	118	158	180	142	131	150
May	120	159	131	152	189	143	134	152
June	116	153	145	169	191	141	137	151
July	115	155	181	200	193	144	145	154
August	115	151	126	256	200	151	156	163
September	119	156	129	191	195	156	166	165
October	117	158	134	226	200	165	173	166
November	117	160	127	238	197	171	178	169
December	124	162	151	293	198	175	183	178
1943—January	134	164	139	277	206	177	185	182

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised November 1941. ³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5. ⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing, the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

SPRING PLANTING ISSUE

THE

AGRICULTURAL

• SITUATION •

MARCH 1943

A Brief Summary of Economic Conditions

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WITH spring planting time almost at hand, farmers throughout the Nation are preparing now for an all-out production offensive * * * Total agricultural production goals this year are nearly 5 percent higher than actual production in 1942, itself a record-breaking year * * * Farmers, as well as urban groups, are urged to produce ample garden stuff for home use, when conditions permit * * * Prices received by farmers for agricultural commodities averaged about 111 percent of parity in mid-February, a four-point drop from mid-January * * * Production supplies for this year's crops, including labor, machinery, seed, and fertilizer, are getting major attention from the Department of Agriculture, now proceeding to assure all supplies possible * * * Farmers last year turned in the greatest production in history, surpassing 1941 total production by 12 percent, at the same time increasing production in the crops most needed in the war. This wartime conversion now steps into a new and more complete phase, as plans for this year's production are formulated, emphasizing further the needs for agricultural products specially needed in the war.

THE SPRING OFFENSIVE

OUR NATIONAL 1943 farm production offensive is beginning to roll. After a winter of getting ready, the time for action has come. We are now at the start of the farmers' spring campaign against the Axis.

Planting time presents a special challenge this year. The planting done in the coming weeks will determine largely the volume and kinds of crops we grow for war use in 1943. All-out production of war crops is urgent. To produce too much of them is impossible, and of some we cannot possibly produce enough. Plantings of these crops, therefore, must break all previous records, if agriculture is to do its part to win the war.

In the world conflict now raging food and other agricultural supplies are weapons both of attack and defense, often just as important as airplanes or tanks or guns. This country is the leading food producer of the United Nations. We have gigantic production resources. We must use those resources now to provide essential supplies to our fighting men, our civilian war workers and their families, and our allies abroad.

To do the full job required this year, each farm will have to meet its own individual war production goals, and then raise as much additional food and fiber as is practical. A little extra production from each farm, above the limit of mere convenience, can do wonders. In total, an extra acre per farm planted in food crops now, or an extra acre shifted from a non-essential to an essential crop, will make a tremendous difference in this year's harvest. That difference will be needed for really effective war production.

LAST year our farmers set a new total production record. Bearing down hard on the products most needed, they doubled production of soybeans and peanuts in a single year. They produced 600 million dozen

more eggs than ever before, 20 million more hogs, more beef, more milk, more corn. Good weather helped, but that wasn't all. Farmers gave greatest emphasis to producing crops and livestock most needed to win the war. They chalked up new records at a time when a million and a half farm workers had gone into the armed services or war industries. Their accomplishments were amazing.

In the season now beginning, however, an even greater task is ahead. As the armies of freedom spread their attacks to new fronts, food production must not only be maintained, it must be increased to take care of the expanding needs. Back in November, the Department of Agriculture announced agricultural production goals for this year, based on prospective requirements. Those goals were huge, many of them well above last year's record production. Large as they were, however, we have increased them for some vital commodities, including soybeans, flax, potatoes, dry peas, dry beans, sweetpotatoes and grain sorghums.

To help farmers reach their war goals, many measures have been taken by the Government. Price supports are being maintained for all war crops, and in some cases further steps are proposed to help farmers meet added production costs. Here is the crop production the Nation is asking of farmers this year: A million and a half acres more soybeans than called for in the goals last fall; a half million acres more flax; 60 thousand acres more dry peas; a quarter million acres more sweetpotatoes; 2 million acres more grain sorghums; 100 thousand acres more Irish potatoes; and a half

million acres more dry edible beans. As originally announced, the peanut goal calls for nearly 2 million acres more than last year's total. Although the original figure was not raised, special payments are being proposed to encourage growers to plant more peanuts. In addition to other price supports announced earlier on a wide range of products, price supports have been announced for the four major canning crops—tomatoes, peas, sweet corn, and snap beans.

Also extremely important this year is the job of maintaining and increasing our feed supplies, and of keeping them in balance.

THE crop production job ahead is one that calls for toil and sacrifice. Farmers face many hardships and many difficulties in obtaining the production needed. Labor is short in many areas. Supplies of machinery are limited. Fertilizer supply is tight. Lack of trucks and tires and gasoline presents many problems. Long hours, hard work, and fretful care are in store for everyone on the farm front.

There is a brighter side to this picture, however. In the first place, we have a splendid corps of skilled farm people, willing to put forth their utmost efforts in this crisis. One of our main problems is to keep the key people in this group on the farms where they are needed more than anywhere else. Another is to assist capable farm families, now living on farms too small to make fullest use of their labor, to relocate on land where they can produce larger quantities of foods. Another is to find full time replacements for workers who have left the farms, to train these replacements for farm work, and to get them into farm jobs as quickly as possible. Still another is to transport migrant workers to the places where they are needed, and to enlist townspeople and school children and women workers for peak season labor needs. All these needs are now fully realized.

In the second place, we have gigan-

tic stores of food grains in the Ever Normal Granary, and great reserves of fertility are stored in our soil—the results of far-sighted programs carried on during the last decade.

WE HAVE a well-rounded national farm program, streamlined for war, ready to serve needs as they arise. The war production obtained last year would not have been possible without it. Among other features, this program now includes definite provisions for supporting the prices of farm products until well after the war's end, thus safeguarding farmers against sudden post-war declines. These price supports, coupled with the Triple-A payments, the commodity loans program and the broadened program of production credit, should help materially to put farmers into position financially for full production.

Of course financial difficulties are not the only problems to be dealt with. With farm manpower being reduced by war, we need additional machinery to reach our maximum production. Recently the War Production Board increased the amount of steel available for making farm machinery this year, bringing the total considerably nearer to the figure I had originally requested. Even so, we shall not be able to get all the machinery needed, and may not even get enough for replacements. Metals of all kinds are so much in demand for all war production that the supply simply won't go around. We shall have a good supply of repair parts, however, and we shall have to do the job as best we can with the supplies available.

We are fortunate also in the fact that the people of the Nation as a whole are now awake to the size of our food needs, and to the serious nature of the problems confronting us. As new problems arise and as present ones begin to require more attention, the awakened public concern at our production difficulties will prove a valuable asset.

CLAUDE R. WICKARD,
Secretary of Agriculture.

Commodity Reviews

GOALS Farmers at the beginning of this crop year face the biggest and toughest assignment in history. Assuming normal yields, acreage goals for farm commodities this year call for a 4 percent increase over 1942 in crop production. Livestock goals for 1943 are 12 percent above 1942 production. Size of the task ahead is shown by the fact that last year's production was 12 percent higher than in 1941, which year itself was a record-breaker in many crops. Further heightening the difficulties of the job will be the wartime reduction in skilled agricultural labor supply, and difficulties in obtaining new machinery.

Farmers generally are fully aware of the urgent need for full-blast production this year, to supply the requirements of the armed forces, people on the home front, and the Nation's allies abroad. Difficult as the achievement of the necessary production may be, therefore, farmers of this country are determined to do the job.

FOOD Although the per capita supply of food for civilians will be less this year than last, it will probably be close to the 1935-39 average. With low income groups earning more money than usual, and important foods rationed, a larger part of the people may be well fed in 1943 than in the past. Assuming average yields in major crops and continued gain in livestock production, total agricultural production this year will exceed that of 1942. The increasing requirements of food for military and lend-lease uses, attendant upon expansion in the theaters of war, accounts for the expected shrinkage in civilian supplies. By careful use of available supplies, and by rationing of scarce commodities, it is believed enough food will be available on the average for a reasonably adequate civilian diet.

Last year, more than 12 percent of

the food produced in this country for human consumption went into military and lend-lease uses. These demands were and continue to be heavy for the protective foods, especially for meat, milk, and eggs, which can be concentrated and shipped easily. In 1943, military and lend-lease requirements are expected to take 20 to 25 percent of the beef produced here; of the pork, 35 to 40 percent; eggs, 25 to 30 percent; butter, 15 to 20 percent; cheese, 40 to 45 percent; condensed and evaporated milk, 40 to 50 percent; lard, 25 to 30 percent; other edible fats and oils, 20 to 25 percent; canned fruits, 50 to 60 percent; wheat, 10 to 15 percent; and rice, 15 to 20 percent. In all, these requirements probably will account for about one-fourth of the Nation's total production of food for human use. At the same time, civilian demand for food is unusually large because of increased domestic employment, increased earnings, and inability of consumers to spend money for many durable goods items that are no longer for sale.

Even with increased production, the total of civilian, military and lend-lease requirements result in over-all shortages in some foods. Transportation difficulties, price ceiling differentials between areas, and abnormal concentration of people in defense areas have contributed to shortages in certain localities. Shortages led to rationing of sugar and coffee last year, to rationing of processed fruits and vegetables beginning last month, and to the necessity for rationing meats, canned fish and fats and oils, which will be undertaken March 29, according to recent announcement.

DAIRY PRODUCTS With 30 percent of current butter production set aside for Government use, supplies for civilian consumption in March were considerably smaller than in January. Civilian supplies may increase slightly in later months.

however, as butter production increases seasonally. Because commercial stocks of cheese are relatively large, the order setting aside 50 percent of the Cheddar cheese for Government use, which became effective February 15, has had little effect on civilian cheese consumption. Rationing of cheese also is to begin March 29. Supplies of most manufactured dairy products other than butter, which are available for civilian consumption in the second and succeeding quarters, will be less than in the current quarter. Consumption of fluid milk is expected to continue at a relatively high level.

Measures initiated recently by the Department to increase production of corn and barley this year, and to increase the supply of high protein feeds for immediate feeding, will help farmers to meet the 122 billion pound goal for milk production in 1943. Prices of the principal manufactured dairy products under price ceilings, which will be supported through June 1944, will average considerably higher in 1943 than in 1942, especially during the summer when prices normally decline.

FATS AND OILS Production goals for soybeans and flaxseed were raised in January to help meet growing needs for fats and oils and high-protein foodstuffs. The new goal for soybeans, 12 million acres harvested for beans, is 1.5 million acres higher than the goal announced last November. The revised flaxseed goal, 5.5 million acres planted, is up half a million acres. Other goals for oilcrops remain unchanged at 5.5 million acres of peanuts picked and threshed and 22.5 million acres of cotton planted. With normal yields, these acreages would produce about 4.1 billion pounds of vegetable oil compared with an anticipated production of about 3.7 billion pounds on the 1942-43 season. Some additional supplies of vegetable oil may be obtained from corn grinding operations, olive pressings, and the

crushings of tung nuts and other vegetable oilseeds.

Incentive payments to farmers who plant in excess of 90 percent of their 1943 farm goals for soybeans, peanuts, and flaxseed were recommended by the Department. For each acre above 90 percent, but not in excess of 110 percent of the individual farm goal, farmers would receive a payment of \$15 for soybeans, \$30 for peanuts, and \$10 for flaxseed. Reflecting sharply smaller receipts of flaxseed in terminal markets, prices of linseed oil and flaxseed continued to rise in January and February. Prices of other fats and oils remain unchanged at ceiling levels.

MEAT ANIMALS Meat slaughter under Federal inspection in 1942 totaled nearly 15.5 billion pounds, compared to the previous record of 13.4 billion pounds in 1941. Total dressed weight of meat animals slaughtered under Federal inspection in 1942 was 15 percent above 1941 and 32 percent larger than the 1937-41 average. Hog slaughter accounted for most of the increase but slaughter of all classes of meat animals (hogs, cattle, and sheep) was at record levels. The large production of pork reflected the larger production per hog as well as the large number slaughtered. Although the average weight of inspected hogs slaughtered was more than 4 pounds above the previous record in 1941, lard production per animal was slightly smaller. The average live weight of inspected cattle slaughtered was 954 pounds, 7 pounds lighter than in 1941 but heavier than in any other year since 1933. Final estimates for total meat production in 1942 are not yet available but it probably was about 22 billion pounds. This compares with 19.5 billion in 1941 and the 1943 goal of 25.7 billion.

POULTRY AND EGGS Farmers on February 1 indicated intentions to buy 16 percent more chicks this spring than the record number purchased in 1942. Because a very favorable egg-feed price ratio is in

prospect for the spring, these intentions probably will be carried out or surpassed. Current demand for baby chicks for specialized production of broilers and fryers also is at a record level, with many hatcheries booked to capacity. Net withdrawals of poultry from storage have been very heavy, and holdings of poultry in cold storage on March 1 were 43 percent below those of a year earlier.

Egg production in 1943 will be much larger than the record output of 1942. Laying flocks are 15 percent larger than last year, and have proportionately more pullets. Egg prices probably will be slightly more favorable than last year, relative to prices of hogs and butterfat. After the seasonal decline from November to mid-February, egg prices have increased and now average 25 to 30 percent higher than a year ago. Permanent ceilings for eggs, which went into effect on March 6, will allow farmers to receive at prices at least 3 cents above the support levels. Quantities of eggs used for drying, storing, and hatching are increasing, and demand for civilian consumption will continue strong.

FEED Record disappearance of feed grains during the 1942-43 season will leave a corn carryover at end of the marketing year of about the same size as at the beginning. The carryover of oats and barley will be somewhat smaller. With livestock numbers increasing, the 1943-44 supply of feed grains per grain consuming animal unit may be 10 to 15 percent less than this season. Number of grain consuming animal units on farms increased about 11 percent in the year up to January 1, 1943.

To encourage larger production of feed to meet increasing requirements, farmers are now permitted to overplant their corn allotments without penalty, provided they have planted up to their goals in war crops. Grain sorghums, hay, and pastures have been placed on the list of war crops, to encourage feed production.

The quantity of 1942 corn sealed by

farmers up to February 20, 1943, totaled about 48 million bushels—37 million less than at that date in 1942. This decrease reflects the fact that corn prices this year are higher in relation to the loan rate than in 1941-42. On January 15, the price of corn averaged higher than the loan rate in all Corn Belt States except South Dakota. Quantity of corn sealed in the rest of marketing year may be small.

The last of the 125 millions of wheat designated by Congress to be sold for feed in the 1942-43 marketing year was sold out during February. Secretary Claude R. Wickard has asked that the Commodity Credit Corporation be allowed to sell an additional 100 million bushels of wheat for feed in the rest of the period.

TRUCK CROPS A reduction of 11 percent is expected in the commercial vegetable crop of this spring, compared with that of 1942. Supplies of important fresh vegetables will be relatively short during March and April. Frosts in January, February and early March caused considerable damage. Frost damage was severe for peas, snap beans, cabbage, lima beans, eggplant, tomatoes and peppers. In an effort to encourage greater production of essential fresh vegetables, the Department is offering a production payment of \$50 per acre for each acre of approved truck crops, in excess of 90 percent of the individual farmer's truck crop goal, up to 110 percent of that goal. The Department also has announced price supports to growers of the four major canning crops—tomatoes, peas, sweet corn, and snap beans. Guaranteed prices will range on the average from 20 percent to 35 percent above last year. The Government will purchase the output of certified processors at prices high enough to permit canners to pay growers the specified minimum prices.

COTTON Grade and staple premiums and discounts under the 1943 cotton loan program, announced well in advance of the

planting season, will help cotton farmers in making definite plans for 1943 operations. To encourage production of long staple cotton, rather than the shorter staples, premiums on the higher grades of long staple cotton are at the same level as in 1942. Where practicable, all cotton farmers are urged to shift to longer staple varieties than they have raised before. The 1943 quality differentials bear a much closer relationship to current market quotations than in 1942. Especially is this true of discounts upon the lower grades. Other significant changes for 1943 are the elimination of differences in the premiums and discounts between rain-grown and irrigated cotton, and the widening of the differential between middling $\frac{3}{8}$ inch and middling $\frac{1}{2}$ inch cotton, from 20 points under the 1942 loan to 85 points under the 1943 loan. In effect, the widening of the differential between the two staples will raise the loan rate

on all cotton with staple longer than $\frac{3}{8}$ inch.

Index Numbers of Prices Received and Paid by Farmers

(1910-14=100)

Year and month	Prices received	Prices paid, interest and taxes	Buying power of farm products ¹
1942			
January.....	149	146	102
February.....	145	147	99
March.....	146	150	97
April.....	150	151	99
May.....	152	152	100
June.....	151	152	99
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	169	154	110
November.....	169	155	109
December.....	178	156	114
1943			
January.....	182	158	115
February.....	178	160	111

¹ Ratio of prices received to prices paid, interest and taxes.

Prices of Farm Products

(Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State)

	5-year average, August 1909-July 1914	February average, 1910-14	February 1942	January 1943	February 1943	Parity price, February 1943
Wheat (bushel).....cents.	88.4	89.2	104.9	117.5	119.5	141.4
Corn (bushel).....do.	64.2	60.1	76.6	88.0	90.4	102.7
Oats (bushel).....do.	39.9	39.8	52.0	52.5	55.5	63.8
Rice (bushel).....do.	81.3		161.4	174.2	174.7	130.1
Cotton (pound).....do.	12.4	12.3	17.80	19.74	19.68	19.84
Potatoes (bushel).....do.	69.7	66.3	104.5	117.8	125.7	114.9
Hay (ton).....dollars.	11.87	12.02	10.76	11.20	11.94	18.99
Soybeans (bushel).....do.			1.78	1.59	1.60	1.54
Peanuts (pound).....cents.	4.80	4.9	5.44	6.23	6.45	7.68
Peanuts for oil (pound).....do.			4.08	3.97	4.03	3.76
Apples (bushel).....dollars.	.96	1.06	1.20	1.60	1.71	1.54
Hogs (hundredweight).....do.	7.27	17.16	11.85	14.07	14.63	11.63
Beef cattle (hundredweight).....do.	5.42	5.31	9.89	11.78	12.36	8.67
Veal calves (hundredweight).....do.	6.75	6.72	11.85	13.60	14.18	10.80
Lambs (hundredweight).....do.	5.88	5.96	10.69	13.04	13.77	9.41
Butterfat (pound).....cents.	26.3	27.4	36.2	49.6	50.0	43.2
Milk, wholesale (100 pound).....dollars.	1.60	1.77	2.58	3.06	3.06	2.63
Chickens (pound).....cents.	11.4	11.1	17.4	22.1	22.8	18.2
Eggs (dozen).....do.	21.5	23.7	27.5	39.0	34.2	30.3
Wool (pound).....do.	18.3	18.5	37.1	39.5	39.8	29.3
Tobacco:						
Fire-cured-types 21-24 (pound).....do.	13.6		13.3	16.4	17.0	13.7
Air-cured (dark) type 35-36 (pound).....do.	22.9		10.3	15.6	13.7	11.0

¹ Revised.

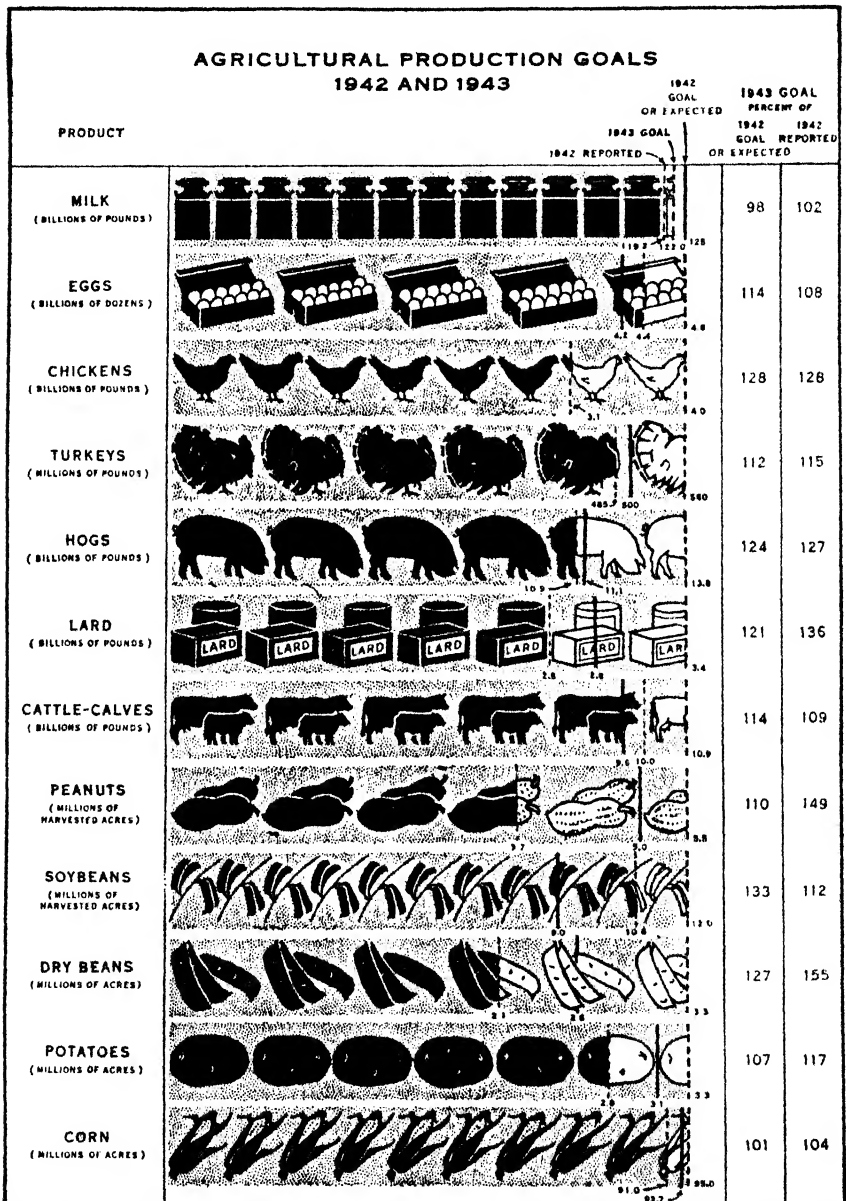
² Base price crop years 1919-28.

³ Adjusted for seasonality.

⁴ Preliminary.

FRUITS Wholesale prices of all fruits in city markets have been ranging considerably above those of a year ago—in many cases as much as 50 percent above. Returns to growers also have greatly exceeded last season's. City auction prices of fresh citrus fruits advanced sharply to high levels in late December, then de-

clined in the first half of January to relatively low levels. From about mid-January, prices of fresh citrus increased steadily upward through the first week of February. On December 31 the Office of Price Administration announced ceiling prices for all fresh citrus.



MILLIONS OF VICTORY GARDENS

EVERY farm, wherever climate and water supplies permit, should have this year a Victory Garden large enough to produce the family's entire year's supply of vegetables, vegetables fresh from the garden or storage pit, vegetables canned, dried, salted or frozen, but vegetables in some form or other sufficient to provide three or four servings a day every day in the year. Above all, first choice should be made of green and leafy vegetables, yellow vegetables, tomatoes and more tomatoes, for these groups of vegetables are the richest in nutritive values. They are particularly rich in vitamins A and C and the minerals, lime and iron, so essential in maintaining health. Yes; 6 million farms at least need to have bigger and better gardens this year.

There is need also for 12 million or more town and suburban gardens as well as metropolitan community or allotment Victory gardens, gardens that will contribute a measurable supply of vegetables for nonfarm homemakers. Secretary of Agriculture Claude R. Wickard, national food administrator, in a recent press release called on every town, city, and suburban family with a sufficient plot of open, sunny, and fertile ground or access to a community or allotment type of garden to join in the 1943 Victory Garden program.

By growing a home vegetable garden, he said, any citizen can make a worthwhile contribution to the Nation's total food supply and thus help win the war.

"Victory gardens offer those on the home front a chance to get in the battle of food," Secretary Wickard said. "While farmers broke all previous records of food production in 1942 for the third consecutive year, needs are now practically unlimited. We need more food than ever before in history—we need it for our armed forces in action on world-wide fronts, for our men and women in training,

and for our fighting allies. We need it to keep those at home healthy and strong.

"We are asking farmers to produce even more food in 1943 than last year and they will do their level best to meet their goals. Every farm family will be expected, of course, to have a garden for its own use, and where possible, to send extra supplies of fresh vegetables to nearby markets.

"At the same time, the residents of towns, cities, and suburban areas who have suitable garden space available can make an important contribution toward supplying our total food needs by growing Victory gardens. The vegetables they produce will provide nutritious food for the family table, lessen the drain on commercial food stocks, and ease transportation burdens. Home-canned vegetables also will insure a reserve food supply for family use."

SO GREAT is the need of the military and naval forces and allies abroad that the Government will take one-half of the 1943 prospective commercial pack of vegetables. The transportation situation is such that the quantities of vegetables so freely shipped in the past from far-off points, will be greatly lessened. Producers near to consumption points will be strained to grow enough vegetables for canning plants and nearby markets. Retail costs of vegetables necessarily have risen. Also, numerous other factors affecting a nation at war may prevent many people from getting the amounts of these protective foods they should have. Of special concern is the resultant insufficient daily supply of vitamin C.

So every urban or suburban family with sufficient open, sunny space and fertile ground should have a Victory garden this year. Vacant real estate developments, vacant property surrounding industrial plants, vacant lots, ground on a railroad right of way,

undeveloped park spaces, property nearby to industrial housing communities, vacant property of any kind that is at all fertile and can be tilled, ought to be given over to Victory gardens. Some school grounds might well be turned into school farms to produce vegetables for school lunches.

Farms and suburban homesteads should no longer put off planting some fruit to meet the home needs. Small fruits, such as grapes, strawberries come into bearing soon and, with ordinary good care, reward the owner with highly desirable and healthful food. Strawberries seem especially desirable, for they are rich in vitamin C, and can be grown easily on any good moisture-holding garden soil. Nor should the planting of the kinds of tree fruits that do well in the community be delayed any longer.

GREEN and leafy vegetables, spinach, lettuce, kale, collards, broccoli, cabbage, snap and lima beans, peas, carrots, yellow turnips, yellow squash, yellow corn, and tomatoes must be the mainstay of every garden. All are rather easily grown, given half a chance. They can be planted so

that the garden yields something from early spring until the hard freezes of winter. And they supply the essential vitamins A and C and some minerals. Half a cupful of cooked greens will supply an adult with his daily vitamin A requirement. Three-fourths of a cupful of green cabbage will yield one-half of the day's vitamin C needs.

To be sure Victory gardeners will want to plant other things. On our farms, potatoes, sweetpotatoes, pumpkins, parsnips, celery, oyster plant, dry beans and peas, and herbs as well will be grown for home use. But the town gardener with restricted garden space must plant to get the most out of that space and the groups of vegetables named will do that.

The outline shown in the following table should serve Victory gardeners as a guide in planning their garden and home conservation needs. This outline is based on vegetables of the kinds emphasized above that may be needed for one person for the year. Multiply these amounts by the number of persons in the family, and it will be seen how large the garden should be and how much of the garden product should

Victory Gardens and the Home Food Supply

How Much to Eat—To Preserve—To Plant Yearly of Green, Leafy Vegetables, Tomatoes, Yellow Vegetables

Suggested servings per person yearly	Home-grown vegetables and fruits	Amount to store or preserve per person per year	How to preserve	Amount to plant per person (based on fair yields under favorable conditions)	
				Spring	Fall
180	Cabbage.....	40 pounds.....	Pit storage.....	18 plants.....	18 plants.....
90	Lettuce.....	10 pounds.....	Kraut.....	9 feet.....	16 feet.....
40	Spinach.....	6 pints.....	Canning.....	15 feet.....	15 feet.....
10	Broccoli.....	8 quarts.....	Canning.....	4 plants.....	4 plants.....
10	Kale.....	4 pints.....	Canning, salting.....	60 feet.....	80 feet.....
50	String beans.....	15 pounds.....	Canning.....	45 feet.....	45 feet.....
30	Peas.....	30 pounds.....	Pit storage.....	10 feet.....	15 feet.....
60	Yellow turnips.....	10 pounds.....	Pit storage.....	15 feet.....	15 feet.....
120	Carrots.....	10 pints.....	Canned.....	5 feet.....	5 feet.....
10	Beet tops.....	1 pound.....	Dried.....	100 feet.....	100 feet.....
50	Yellow corn.....	10 pounds.....	Dry storage.....	1 plant.....	3 plants.....
30	Yellow squash.....	30 quarts.....	Canning.....	15 plants.....	15 plants.....
300	Tomatoes.....		Catsup.....		
			Chili sauce.....		
980					

Adapted from table prepared by the Extension Service, College of Agriculture, University of Illinois.

be preserved or stored for use. The estimated production will yield 980 servings per person per year, something over 2½ servings per day. These will be supplemented, of course with purchased vegetables such as potatoes, dried beans, root crops and other things. If the garden is big enough, the Victory gardener will also want to grow some other kinds, but the kinds given here are those most needed.

VICTORY gardeners should be prepared, of course, the Secretary of Agriculture has said, "to take care of their gardens faithfully right through the spring and summer season and, where climate permits, right through fall and winter as well. We cannot afford to waste seed, fertilizer, insecticides and effort this year." This implies that the Victory gardener should plan his garden well and follow through so that the garden will produce something even after the first flush of spring and the easy growing days of early summer. Moreover, it means that the Victory gardener should look very carefully to his soil. In many backyards, the soil is not conducive to vegetable gardening because it is the soil that was taken out when the cellar was dug. That is always hard stuff to manage and bring into shape. By starting with fertile, easily worked soil, almost half the battle is won. The beginning Victory gardener should also avail himself of the very great amount of information on gardening which is available. The Department Circular 483 "Victory Gardens" will be most helpful. Circulars from the State Extension Service of the various State Agricultural Colleges, likewise, may be obtained freely. Moreover, in every locality there are gardeners of experience who will help the new gardener to judge quality of the soil and find how to lay out and plant the garden. Much work and many disappointments will be avoided if the beginner will plan his garden and carry on his work in line with such counsel.

The program will be carried out on a national scale, with backyard and community gardens, farm gardens and school gardens everywhere, perhaps not blooming like roses, but yielding the utmost of much needed protective health maintaining vegetables.

H. W. HOCHBAUM, *Chairman,*
Victory Gardening Committee,
Department of Agriculture.

New Equipment Orders Issued

CHANGES have been made in the WPB order controlling the manufacture of farm machinery and equipment and repair parts which permit increased production of a number of items.

Among other measures, the changes: (1) Remove from restrictions of the order, beehives, farm gates, feed trucks, grit boxes, hog troughs, laying nests, milk stools, poultry waterers and feeders, and livestock feeders, where these items are made of non-critical materials; (2) permit manufacturers to make stanchions, stalls, and livestock pens from rerolled rail steel; (3) make it possible to include items of harness hardware used for replacement and repairs within the repairs quota. This means that harness hardware may be produced at about 120 percent of the quantity produced during the base period; (4) permit manufacturers of barnyard items such as feed, litter, and hay carriers, cattle stalls and stanchions, and fittings, who have not been assigned production quotas, to construct a limited amount of such equipment for repair and maintenance. They are permitted to segregate 30 percent of their base production of these items and add the value of such amount to their repair parts quota; (5) brings water-well casings of the type commonly manufactured from steel sheets and used in construction of water wells for irrigation or other farm purposes under the terms of the amended order, and sets a quota of 85 percent of the base rate for all manufacturers.

WAR SPEEDS STANDARDIZATION

WARTIME necessity has led to a marked expansion of the standardization, grading, and inspection work carried on by the Department of Agriculture. One of the big jobs has been the inspection of practically all canned goods for the Army, the assignment being carried out by Food Distribution Administration personnel at the request of the Quartermaster Corps. Also the increased amount of food purchasing by the Federal Government as a result of the expansion of the armed forces, and the buying of food for the Lend-Lease programs which were inaugurated in the spring of 1941, has accelerated all standardization, grading, and inspection work.

Speed is essential in wartime. The previous work done by the United States Department of Agriculture in standardization and in setting up an inspection force began to pay real dividends in saved time as the volume of Government purchases increased.

Because bids on food sales came from dealers all over the country, it was necessary to have a uniform basis for bidding. As a result of educational activities carried on over a number of years, a great many producers, dealers, and handlers were already familiar with the official standardized grades which had been promulgated. This knowledge on their part was both a time saver and a convenience when vendors were called upon to fill orders from the Government, as the great bulk of Government purchases was made on the basis of existing U. S. standards for grades. The established official standards provided a sound basis for buying the quality of products needed for specific purposes.

HERE are just a few figures on how the volume of inspection work has increased. The comparisons are for the fiscal years 1941 and 1942: Butter inspected increased from 278 million pounds to 325 million pounds; cheese

from 44 million pounds to 340 million pounds; dressed poultry from 77 million pounds to 118 million pounds; dry skim milk from 30 million to 185 million pounds; evaporated milk from 204 million to 1,631 million pounds.

These purchase programs made it necessary to inspect a large volume of products which either had not previously been inspected at all, or only in small quantities. In 1942, for example, lard inspections totalled more than 825 million pounds; canned meats 759 million pounds; cured pork, 463 million pounds; fat back, 100 million pounds.

Dried eggs are in big demand as a wartime food and the growth of the egg-drying industry finds a parallel in inspection work. In 1941 the volume of dried eggs inspected was about 1 million pounds. By the last year the volume was 139 million pounds.

A resident sampler is assigned to each of the egg-drying plants in operation. It is the job of the resident sampler to send a sample of each batch of eggs dried to a laboratory of the Food Distribution Administration at Chicago. Here the product is tested for fats, solubility, solids, acidity, color, and texture. On the basis of these tests the acceptability of the product for Government requirements is determined.

But egg drying isn't the only field in which it has been necessary to hire new inspectors. The number of meat graders in 1942 had more than trebled from the 1941 figure, and the same was true with processed foods. The number of Federal-State fresh fruit and vegetable inspectors also increased, and more than 1,000 names have been added to the list of licensees.

IN recent months an increasing number of women have been employed for inspection work in laboratories and some have been assigned to jobs in processing plants. In connection with the work in processed foods, for example,

the number of women has already increased from 2 to 105 and more are being hired.

Government procurement operations, although accounting for a large part of the impetus to grading, standardization, and inspection work are not the sole factor. Another motivating force is the need for measurements of quality as a factor in the determination of fair prices. This is important in connection with the wartime price control programs.

Under normal conditions the relationship between price and quality works itself out on the basis of supply and demand. The lower quality product tends to have a lower price while the higher quality product tends to command a higher price. Ceilings tend to disturb this relationship, particularly when demand increases and the supply remains constant or declines. Without close supervision over the determination of grades, there is a natural tendency for the interested individuals to up-grade some products. This up-grading may be the result either of ignorance or design, but in either case it causes the consumer to pay more than he should for the goods he buys.

The Office of Price Administration in administering the price control program, uses the standards for grades formulated by the Department of Agriculture in connection with the establishment of ceiling prices. To make these more useful for price control purposes, the Department of Agriculture has announced revisions and simplifications of some of its standards for grades. This has been true with poultry, eggs, and butter. Standard letter designations--AA, A, B, and C, have been substituted for the older name designations.

MANY of the grades of the Department of Agriculture already are familiar to consumers. This understanding of the relative merits of the various products sold on a graded basis make shopping easier. Probably the best known of the grades, as far as

consumers are concerned, are those for fresh meats and canned fruits and vegetables. As long ago as 1927 the Department stamped carcasses so that each retail cut would show the grade name. First beef, then veal, lamb, and mutton were graded and stamped for retail use. For a number of years many canners have been packing their products on a grade basis. The number of plants operating under continuous inspection--that is, observance of all stages of the canning operation by Federal inspectors--has been increasing steadily.

Expansion of standardization and grading brought about by the needs of war probably will continue in the post-war period, because of demand originating with producers, handlers, and consumers. Greatest future demand for extension of grading and grade labeling probably will come from consumers. During the current war emergency more and more consumers will become familiar with U. S. grades and, as housewives and shoppers get the habit of buying by grade, they may want the system continued and expanded.

Alongside the day-to-day operations of the grading and standardization program in the marketing of farm products, and the expansion brought about by war necessity, has been a continuing need for research. This research is designed to keep the work up to date--to see how the tentative standards are working out in practice--to find how existing grades are standing the daily test of marketing needs--to learn what revisions and refinements need to be made for the improvement of the programs.

As time goes on and other needs arise, continuing research may show the need for other amendments to the standards. These will be made when needed, for the final criterion of these Federal programs is usefulness in operation.

C. W. KITCHEN,
*Deputy Director,
Food Distribution Administration.*

MACHINERY, LTD.

TAKE a pinch of new farm machinery. Season abundantly with repair parts, add a subnormal amount of vital farm workers and mix. Uncle Sam's assignment in 1943 is to make the biggest batch of farmstuffs in history—with the above recipe.

M. Clifford Townsend, Director of the Food Production Administration, recently expressed confidence, that the job will be done, despite the difficulties. "Although the present allotment of equipment is limited," he said, "farmers are doing their level best." Their attitude is: "We will, if it's humanly possible."

Of necessity, about 75 percent of the Nation's record output of steel and other critical materials has been rolling directly to war. Because materials for farm machinery are limited, farm machines must be apportioned where they will bring the maximum food and fiber production for keeping our fighting men and civilians behind them going strong.

Wars are gluttons for steel. It takes 81 million pounds of rough stock steel to make a 35,000-ton battleship. The 3,538,000 pounds of rough stock steel which go into a destroyer are enough for the manufacture of more than 2,000 tractors. The steel going into a heavy tank is enough for about 200 plows.

Controlled distribution of farm machinery began last November 28. On that date, following a "freeze" of all new machinery, a permanent plan for rationing became effective. The plan was incorporated in Rationing Order C—later redesignated as Food Production Order 3. The program is being administered by the United States Department of Agriculture, which was delegated the authority for rationing by the War Production Board and Office of Price Administration.

Under WPB Limitation Order L-170, the Department originally was

allocated enough steel to make 23 percent of the 1940 output of new farm machinery, and 130 percent of the average annual net sales of repair parts during 1940 and 1941.

However, a recent allocation of steel for new machinery was authorized which will make possible the production of about 40 percent as much as was produced in 1940, and the quota of repair parts was raised substantially.

Rationing Order C decreed that about 75 types of machinery—mainly heavy machinery—would be sold only to persons having "purchase certificates." Two lists of items were included: Schedule I listed rationed items for which State and county quotas were set; and Schedule II listed implements which were not to be rationed, but upon which distribution directions were to be given. Under the order, manufacturers were instructed to maintain a 25 percent "holdback" to meet unforeseen emergencies.

A RECENT amendment to the rationing plan provides that a State USDA War Board can authorize farm machinery manufacturers, distributors and dealers within its State to work out quota exchanges with one another to expedite distribution. Previously, quotas to sell farm equipment were worked out at the manufacturers' level and War Boards had no power to authorize exchanges in State quotas. Where inequalities between county quotas exist, State War Boards now may rectify them.

In each agricultural county in the Nation, the County USDA War Board has appointed a County Farm Rationing Committee to issue farm machinery purchase certificates for the rationed equipment. The committees have their headquarters in County War Board offices and serve without pay. Three members and two alter-

nates, all of them local farmers, serve on each committee.

State quotas for each of the rationed items were set up and distributed among counties after consideration was given to the relationship of a county's ability to produce, and its need.

Although about 75 types of machinery are rationed, many types are not rationed and can be bought as usual. Dealers, however, will have fewer of these machines to sell than usual. Repair parts and attachments are not rationed.

If a farmer needs a new machine that is on the rationed list, he fills out an application form, obtainable from machinery dealers or County Farm Rationing Committees. On this application, the farmer explains why he needs the new equipment. For example, he may show that he is unable to repair an old machine or that he cannot get a used machine by buying, renting, or trading. He must agree that the machine he intends to replace will be used for the best interests of the Nation. For instance, he may indicate that he needs the old machine himself, or that he will turn it in for rebuilding or for use as scrap after the good parts have been salvaged.

The farmer must also agree that if he gets the new farm machinery it will be used to the maximum on important production. That may mean that he will need to rent it out on occasion, or do custom work with it, or let others use it, in addition to using it himself on his own farm.

AFTER the farmer has filled out an application, his county committee may wish to ask for still more information to help decide what action to take. In some cases, the committee may want to visit a farmer in order to determine the extent of his need for new equipment.

After considering all available facts, the committee makes its decision, either issuing a purchase certificate or

notifying the farmer that his application has been denied.

A purchase certificate authorizes the holder to purchase rationed machinery and equipment. One certificate is issued for each item to be purchased and is good for only 60 days unless renewed by the committee. If a farmer is not satisfied with a committee's decision, the rationing plan contains a provision for appeals.

Throughout the nation, County Farm Rationing Committees are serving as the backbone of this program. Although the program does not have the scope of some rationing programs, it is extremely important to agriculture.

RATIONING alone, however, is not enough to do the full job required. It must be augmented by other related programs. For example, the Department of Agriculture is continuing the machinery repair program which was instituted in 1942. Worn parts which might break down at a critical time during cultivation or harvest are replaced with new parts and the old ones channelled into the scrap pile to start anew the cycle of maintenance. Dealers are receiving repair part orders earlier than ever before. Farmers are attending schools conducted by Federal agencies in order to learn more about maintaining their equipment, repairing it and adjusting it for most effective operation.

The care phase of the machinery program is in full swing. The pre-season checking and overhauling of equipment, and frequent lubrication of important parts while in use, have been stressed. Bright parts which might be damaged by rust—plowshares for example—are being coated with grease or special compounds. Outside worn and weathered parts are given a once-over with the paint brush. Mower blades are greased and hung in machine sheds.

Department agencies are helping to promote projects for sharing of equipment between farmers. Through rings

and pools, machinery which might otherwise be idle part of the time is kept busy for additional periods. Sharing—an old American custom—is getting a real workout during these war days.

Together, rationing, repairing, caring, and sharing farm machinery will help farmers very materially in obtaining the largest possible production this year. These activities, of course,

are not substitutes for a plentiful supply of machines. They are methods of stretching our limited supply. Lack of plentiful machinery and manpower is one of the many sacrifices made necessary by war.

L. L. NEEDLER, *Chief,
Distribution of
Farm Supplies Branch,
Food Production Administration.*

FERTILIZER SUPPLIES

FERTILIZER is a war production tool—a means of increasing wartime production of agricultural supplies for civilians, the armed forces and our allies. As in the case of many other materials, the war itself, while boosting the fertilizer demand, has reduced the supply available.

Fertilizer supplies are governed by the situation of three plant food elements—nitrogen, phosphorus, and potash—which are used both as straight materials and as ingredients in mixed fertilizers. The nitrogen which farmers would use to grow crops must be shared with the armed forces for use in explosives. Nitrogen is used in considerable quantity as straight material and also in a very important plant food element in most mixed fertilizers.

Nitrogen for fertilizer includes both chemical or inorganic nitrogen and nitrogen of plant or animal origin. During recent years an increasing percent of the nitrogen has come from the inorganic sources. This has been due to an increased production of sulfate of ammonia, synthetic nitrate of soda, and anhydrous ammonia. On the other hand we have been using in some years a smaller tonnage of cottonseed meal, animal tankage and fish scrap, which are sources of organic nitrogen. Production of activated sewage sludge, another organic source, has increased. In addition to these sources, many other materials provide sources which contribute some nitrogen to the supply available for fertilizer.

Wartime demands for nitrogen have affected markedly the supply of nitrogenous fertilizer materials. All of the anhydrous ammonia produced, as well as a considerable part of the synthetic nitrogen, have been needed for manufacture of explosives and other instruments of war. As a result, during the last year sulfate of ammonia has provided almost the only reliable source for fertilizer nitrogen. The supply of organic nitrogen has been reduced by the use of larger quantities of protein feed for livestock, and by the decline in imports of tankage and castor pomace. Increased imports of Chilean nitrate, however, have helped to supply needed fertilizer materials.

The quantity of nitrogen consumed in commercial fertilizer is given below, by years, together with the percentage sold directly to farmers as materials.

Year	Tons of nitrogen	Percent sold as straight materials
1936.....	351,000	48
1937.....	411,000	48
1938.....	384,000	48
1939.....	390,000	47.5
1940.....	413,000	49
1941.....	456,000	51

In 1941, of the 451,000 tons of nitrogen used in fertilizer, about 52,000 tons were obtained from organic materials. As is customary, nearly one-half of the nitrogen was sold direct to farmers as straight materials and the other half

was consumed in mixed fertilizer in connection with phosphoric acid and potash.

CONSUMPTION of phosphate as fertilizer has increased in recent years, because of the increase in tonnage of mixed fertilizers and an increase in the use of phosphate as an ingredient in them. A large amount of phosphate fertilizer has been distributed in connection with the conservation program of the Agricultural Adjustment Agency. Plant capacity for production of ordinary superphosphate is considerably larger than the probable demands, although some tight situations can develop during the heavy late winter and early spring season unless adequate reserves are maintained. Production of triple superphosphate has been large. Only a limited quantity of this concentrated material is available for domestic use, however, because much of it is required for export. Its concentrated form permits large savings in use of vitally needed cargo shipping space.

The supply of potash, the third important plant food element used in fertilizer, has been affected by the war, but not as much as in World War I. In 1914 we were totally dependent on European sources of potash, whereas in 1939 we had a well developed potash industry in the United States and required only limited imports of potash to supply domestic agricultural needs. With the outbreak of war, potash production was immediately stepped up to take care of domestic needs, industrial as well as agricultural. However, agricultural needs for potash have been increasing in recent years as more soil building legumes have been included in cropping systems. In addition, when a set of approved grades of mixed fertilizer was established for each State for this year, the average plant food content of low analysis mixed fertilizer was increased, which called for larger use of potash.

AS AN outgrowth of these conditions a shortage in the potash

supply has developed for several individual fertilizer mixers. Some other sources of potash are being made available which will provide supplies about sufficient to take care of most critical needs but not big enough to satisfy the expected increase in demands.

Federal administration of wartime fertilizer programs was transferred from War Production Board to the Department of Agriculture last January 11. On January 18 the Department issued Food Production Order No. 5 on distribution of chemical fertilizers, including mixed fertilizer and straight nitrogen materials, which superseded WPB Fertilizer Order M 23. Objective of the order was to obtain equitable distribution of fertilizers, based upon 1943 requirements in producing the most essential food and fiber crops. Two groups of crops are listed, group A having first priority and group B, including other crops and uses for which fertilizer is permitted.

Key to the 1943 program is the nitrogen supply. Through some restriction in uses and substitution of grades, it is estimated that 35,000 to 40,000 tons of nitrogen will be saved. Although the supply of domestic chemical nitrogen for fertilizer recently has been increased, the supply of organic nitrogen has shrunk. In addition, requirement for several group A crops are larger than last year. The supply of straight nitrogen material, if equitably distributed, is adequate to meet the needs for all group A crops, but may be slightly less than the full requirements for group B crops.

THE situation for mixed fertilizers can be summed up briefly. If all nitrogen and potash in mixed fertilizer is used where it will do the most good in food production, supplies should be sufficient for the full requirements of group A crops. And in no case should B crops be entirely without mixed fertilizer.

The demand for fertilizer is being felt exceptionally early this year. Fertilizer manufacture cannot supply all of the early demand immediately,

because supplies are not available to them and they lack labor and facilities for mixing and delivering so far in advance of the farm needs. The supplies available early are adequate for early crop needs. Later supplies will be available proportionately for the later crop needs. Present regulations prevent hoarding of fertilizer supplies by

requiring that deliveries be made on basis of actual crop requirements to June 30, 1943, and that no deliveries be made now for use after June 30, 1943.

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SEEDS FOR VICTORY

JUST as military victories bank heavily upon food supplies from the United States, production of those supplies in turn depends to a great degree upon the quantities of seed available to farmers back of the battle lines. At this spring season, with American agriculture girding for the greatest food production effort in history, interest in the seed supply prospects of the Nation is keener than usual.

Before the war, this country and others of the United Nations customarily imported large quantities of seed. As a rule, the United States grew its own field-crop seeds, but relied upon Holland, Denmark, France, and other countries of Europe for substantial quantities of vegetable seeds. England was in much the same position, depending in peacetime upon seeds imported from Hungary, France, Germany, and other countries. Russia, on the other hand, raised many of her own seeds, until the invader overran her fertile Ukraine district.

The blaze of warfare has changed these conditions drastically. Now the United States produces not only most of the seeds it needs but also a large portion of the seeds required by her allies. Demands for seeds by farmers in this country have increased greatly, of course, and domestic requirements for seeds have been further heightened by necessity to build up post-war reserves for rehabilitation work.

What the total requirements for seeds for all these purposes will be in 1943 is an open question, but they are expected to be approximately 1½ bil-

lion pounds. United Nations other than the United States will have taken around 14 million pounds of vegetable seeds and about 35 million pounds of field seeds. These figures do not take into account all possible needs, however, for additional supplies will be needed as allied armies free additional territories from the heel of the aggressors.

In view of these large requirements, plus the many wartime changes in sources of seed supply, what is the outlook for seed supplies on the domestic front this year?

THE answer is fairly favorable. Fortunately, for most crops, this country will be able to ship necessary seeds abroad and still have enough to supply farmers in the United States. An important exception in field seeds is the group of small-seeded legumes. Production of these legumes last year was low, and foreign demand for some of them is unusually high. Supplies of northern-grown alfalfa seed are very short. Production of alfalfa seed in this country last year was the lowest in 10 years, because of the smaller harvested acreage and early killing frosts. Russia needs more of this seed than we can spare.

Helped out by the large carry-over from 1941, supplies of red-clover seed are ample. But supplies of alsike-clover seed are low. The 1942 crop of this seed, reduced by wet weather, was one of the smallest on record. The Canadian crop also was small.

The carry-over of 11½ million pounds of sweetclover seed from 1941

has proved a great asset. Production last year was the smallest in 8 years, and total supplies are less than in 1942. Supply and price variations probably will result in some substitution of sweetclover for alfalfa this year. As a rule, a good stand of sweetclover is easier to obtain than one of alfalfa, and sweetclover will fit into the farm program nearly as well as alfalfa.

Lespedeza seed production last year was larger than in 1941. Supplies of this seed are ample. Timothy seed likewise is in ample supply, although seed is being shipped abroad in fairly large quantities. Last year's domestic crop was about average, and Canada's was above average.

FOR vegetable seeds, the supply picture is rather bright. Supplies of nearly all vegetable seeds will be adequate for requirements. Vegetable-seed production in the United States last year reached 334 million pounds, more than a fourth larger than the year before. Last year's increased seed production was most marked for about a dozen vegetables. Broccoli seed production was 231 percent more than in 1941; rutabaga, 200 percent; chicory, 228 percent; Swiss chard, 199 percent; carrot, 118 percent; garden beet, 162 percent; cauliflower, 156 percent; endive, 159 percent; celery, 131 percent; and pole lima beans, 114 percent.

As additional foods become rationed, potatoes will become more important in the national diet, and the need for seed potatoes will increase. There is no shortage of seed potatoes, for the 1942 crop of certified seed potatoes was the largest in history. Nearly 20½ million bushels, 9 percent above the previous record of 1940, were certified in the year.

This fairly favorable over-all supply situation is not, of course, the result of accident. It is the fruit of long months of work by commercial seed producers and others, cooperating under leadership of the Department, in a concerted effort to produce record quantities of seeds. Production goals for a number of annual seeds were established last year, both for vegetable seeds and field crop seeds, and production has been encouraged through a wide variety of activities. Directly involved in the production of a number of the seeds needed, have been the Food Distribution Administration, in carrying out seed purchase programs for lend-lease, war relief agencies, the United States Army, the American Red Cross and other agencies; the Food Production Administration, in its price-support program; and through the AAA incentive and practice payments.

G. C. EDLER,

Bureau of Agricultural Economics.

THE FOOD PRODUCTION ADMINISTRATION

UNDER an Executive order of the President, Secretary Wickard last December grouped a number of the Department's agencies into two functional units, the Food Production Administration and the Food Distribution Administration. In the one were gathered the agencies principally concerned with getting production of the right quantities of the right foods, and in the other, those agencies mainly concerned with getting the right distribution of foods.

For the last decade the Nation has had selective service in crops. It now has it more than ever. The difference between 1933 and 1943 is simply a difference in emphasis. Ten years ago, in the face of tremendous surpluses and dwindling markets, it was vital to agriculture and to the Nation's economic well-being to emphasize curtailment of surplus crops like cotton, corn, wheat, rice and hogs, while building up acreage of soil-saving crops.

Today, when both this country and all the United Nations must have food to win the war, it is vital to the world that farmers in the United States produce more—much more—of milk, meat, eggs, vegetables and some other foods than ever before. Today, as in 1933, the task is to produce in accordance with needs. If this task were not performed successfully, it is not too much to say that democracy itself might perish.

TO STREAMLINE the efforts of the Department of Agriculture in assisting farmers in the production job, the Food Production Administration was established. The Administration functions through the following agencies and branches:

- Agricultural Adjustment Agency.
- Soil Conservation Service.
- Federal Crop Insurance Corporation.
- Farm Security Administration.
- Farm Credit Administration.
- Production Loan Branch.
- Production Programs Branch.
- Conservation Programs Branch.
- Production Supplies Branch.
- Farm Service and Supply Branch.

The job of meeting the 1943 goals falls naturally into three parts: (1) To boost acreage and livestock numbers so as to meet or exceed the goals for particular war crops; (2) to get the most out of every acre, every animal, every piece of equipment, every minute of labor available; (3) to hold down acreage of a few crops which are relatively less important to the war effort, or of which supplies are relatively abundant, because the country cannot afford to waste resources in any way whatsoever.

Now, how does FPA help farmers to satisfy these three requirements?

Helping farmers increase their herds and their acreage of some crops falls primarily to the Production Programs

Branch, the Production Loan Branch, the Triple-A, Federal Crop Insurance Corporation, Farm Security Administration, and Farm Credit Administration.

Production Programs Branch spearheads the work of planning agricultural production. Once this program is developed, Triple-A committeemen have the responsibility of carrying the program to the 6 million individual farmers. These committeemen help the farmers lay their goal plans for their individual farms and keep in close touch with them whenever problems or obstacles arise which threaten to impede production.

Triple-A, moreover, makes payments to farmers for raising vitally needed war crops, instead of those which are less valuable to the United Nations. In order to get Triple-A payments, farmers must plant at least 90 percent of their war goals—soybeans, rice, peanuts, and the like. In this way farmers are encouraged to produce the crops that are needed to make good on Secretary Wickard's slogan, "Food will win the war and write the peace."

A further incentive to war production is given by the Crop Insurance Corporation, through which cotton and wheat farmers are able to protect themselves against unavoidable crop loss. With assurance of some income from wheat or cotton, these farmers are placed in better position to grow war crops which may be new to them.

UNDER the new set-up, credit facilities for buying land, financing crops, for rehabilitation and the like, have been geared closely to war needs. The Production Programs Branch has the job of working out with OPA, the Food Distribution Administration, and Commodity Credit Corporation the development of ceiling prices, loan and purchase programs, and other price programs which are intended to stimulate production of war products. The

Production Loan Branch directs and supervises activities of FPA which are primarily concerned with loans to finance food production.

Farm Security and Farm Credit Administrations continue as before to provide loans to farmers who need money to purchase land, livestock, equipment, or supplies for larger and more efficient production. FSA continues to retrain and rebuild the health and abilities of under-productive farmers who need only a little financial advisory assistance to make them independent and valuable wartime producers.

The second big part of the FPA program falls into two divisions: (a) getting the most out of every acre and every animal, which is taken care of jointly by the Conservation Programs Branch, Soil Conservation Service and Triple-A; and (b), obtaining as far as possible adequate supplies of labor, equipment, and machinery, which is the job of the Production Supplies Branch, the Farm Service and Supply Branch and the Farm Security Administration, cooperating with the Agricultural Labor Administration.

Conservation Programs Branch, SCS and Triple-A work out and put into application measures which increase yields per acre and per animal. Such practices as planting on the contour, terracing, strip cropping, and the like, have the immediate effect of stepping up output per acre. They also protect the Nation against the terrible soil waste which was so characteristic of the World War No. 1 period and which culminated in the dust storms of the 1930's.

NEVER before has conservation been of so great importance as now. Last year farmers were blessed with exceptionally favorable weather. Crop yields were the highest on record. It is not reasonable, however, to hope for equally favorable weather in 1943.

Therefore, efforts are required to increase yields by other means, namely, by the extensive use of simple conservation practices which can be adopted easily by farmers throughout the land.

The Farm Security Administration sees to it that farm workers are recruited and transported to areas where they are most needed and will be used effectively. The Agricultural Labor Administration has the responsibility of developing and planning programs for mobile and permanent labor camps, which programs are then carried out by Farm Security.

PRODUCTION Supplies Programs Branch and the Farm Service and Supply Branch determine requirements and appropriate steps for obtaining farm equipment and supplies, and the Farm Service and Supply Branch has charge of rationing of all farm supplies for agricultural production.

The third big part of FPA's job, that of carrying out agriculture's conversion to war production, is undertaken mostly by Triple-A and the Production Programs Branch. The Nation already has relatively ample supplies of short staple cotton and tobacco. Production of these crops must be adjusted to meet demand, in order to provide resources for producing other vital products.

This year gives the acid test to agriculture and agricultural programs. The American people are not in a mood to accept excuses. Nothing but results is good currency today. The job of helping farmers achieve those results in agricultural output is the task of the Food Production Administration.

M. CLIFFORD TOWNSEND,

Director.

Food Production Administration.

NET FARM INCOME IN 1942

FARM income in 1942 reached a new high mark. Data available on farm income and expenditures during 1942 indicate that the net return to farm operators for their labor, capital, investment and management, and for other unpaid family labor, was about 10.2 million dollars. This total was 3.45 million above farmers' net income of 1941, and 1.4 million higher than the previous record reached in 1919.

The estimates of cash income for 1940 and 1942 are given by commodities and by States in tables 1 and 2 of

this report. These estimates take into account revisions in production, disposition, and prices that have been made in the past year, as well as more complete information that has become available on the time when farmers received their payments on commodities placed under loan and on the additional income received by farmers from the redemption of commodities under loan. These data show that the movement of the 1941 crop to market was somewhat later than indicated during the crop marketing season.

Table 2.—Cash farm income and Government payments, by States, calendar years 1941 and 1942

State	1941	1942	1942 Income as a percentage of 1941
	1,000 dollars	1,000 dollars	Percent
Maine.....	58,283	86,311	148
New Hampshire.....	25,437	31,259	123
Vermont.....	49,486	63,321	128
Massachusetts.....	92,116	108,230	117
Rhode Island.....	11,103	13,300	120
Connecticut.....	65,295	75,015	115
New York.....	402,604	407,404	121
New Jersey.....	121,546	149,911	123
Pennsylvania.....	316,802	395,679	125
Ohio.....	438,580	603,704	138
Indiana.....	401,723	565,034	141
Illinois.....	740,961	991,238	134
Michigan.....	304,702	397,834	131
Wisconsin.....	443,787	583,094	131
Minnesota.....	509,357	732,828	144
Iowa.....	908,902	1,297,972	143
Missouri.....	414,039	570,399	138
North Dakota.....	234,104	330,178	141
South Dakota.....	184,256	269,244	146
Nebraska.....	309,309	495,703	160
Kansas.....	419,841	595,000	142
Delaware.....	38,765	50,318	130
Maryland.....	95,928	120,844	126
Virginia.....	160,798	214,872	134
West Virginia.....	51,485	64,614	126
North Carolina.....	301,839	461,757	153
South Carolina.....	107,924	182,225	169
Georgia.....	184,120	248,870	135
Florida.....	148,141	201,661	136
Kentucky.....	202,533	267,921	132
Tennessee.....	204,904	256,751	125
Alabama.....	155,971	201,660	129
Mississippi.....	220,679	322,857	146
Arkansas.....	246,313	320,366	130
Louisiana.....	133,726	197,691	148
Oklahoma.....	279,347	390,338	142
Texas.....	769,745	1,062,301	138
Montana.....	166,016	198,173	127
Idaho.....	131,616	178,439	136
Wyoming.....	66,757	93,183	140
Colorado.....	168,909	246,438	146
New Mexico.....	68,307	99,715	146
Arizona.....	78,630	103,080	131
Utah.....	63,406	83,242	131
Nevada.....	16,671	21,491	129
Washington.....	219,609	310,159	141
Oregon.....	155,256	213,642	138
California.....	874,164	1,167,053	134
United States.....	11,753,872	16,138,319	137

TABLE 1.—Cash farm income in the United States, by crops and by groups of livestock and livestock products, calendar years 1941-42

Commodity	1941 ¹	1942 ¹	1942 income as a percentage of 1941
CROPS			
	<i>1,000 dollars</i>	<i>1,000 dollars</i>	<i>Percent</i>
Wheat.....	603, 221	836, 570	121
Rye.....	13, 085	16, 707	128
Rice.....	56, 590	86, 552	153
Buckwheat.....	1, 106	1, 652	149
Corn.....	349, 569	490, 308	137
Oats.....	84, 792	111, 187	131
Barley.....	61, 010	81, 902	151
Grain sorghums.....	15, 916	18, 509	116
Hay.....	81, 951	115, 313	141
Cotton lint.....	868, 827	1, 250, 915	145
Cottonseed.....	179, 248	201, 754	113
Flaxseed.....	52, 418	96, 073	183
Peanuts.....	64, 474	82, 634	128
Soybeans.....	116, 683	231, 349	198
Tobacco.....	324, 872	483, 344	149
Oranges.....	123, 969	167, 010	135
Grapefruit.....	26, 164	43, 807	168
Lemons.....	33, 761	30, 747	91
Limes.....	264	420	159
Apples.....	120, 903	155, 531	129
Peaches.....	57, 090	86, 169	151
Pears.....	26, 400	40, 694	154
Grapes.....	63, 738	85, 633	134
Cherries.....	15, 175	20, 514	135
Apricots.....	9, 852	16, 007	162
Plums.....	4, 327	6, 341	147
Prunes.....	14, 738	24, 479	166
Cranberries.....	8, 741	10, 400	119
Strawberries.....	35, 743	46, 186	129
Small fruits ²	15, 842	19, 013	120
Figs.....	5, 011	6, 227	124
Olives.....	8, 537	6, 763	79
Avocados.....	1, 657	2, 136	129
Other fruits ³	4, 739	6, 030	127
Truck crops ⁴	485, 752	645, 080	133
Dry edible beans.....	65, 138	83, 440	128
Potatoes.....	147, 772	270, 542	183
Sweetpotatoes.....	20, 625	20, 966	150
Tree Nuts.....	33, 941	38, 774	114
Legume and Grass Seeds.....	40, 810	58, 895	144
Sugar Crops.....	92, 567	130, 662	141
Hops.....	13, 190	14, 816	112
Other ⁵	278, 694	327, 006	117
Total crops.....	4, 718, 401	6, 484, 207	137
LIVESTOCK AND LIVESTOCK PRODUCTS			
Cattle and calves.....	1, 726, 741	2, 401, 043	139
Hogs.....	1, 304, 366	2, 138, 880	164
Sheep and lambs.....	229, 754	334, 033	145
Total poultry ⁶	447, 485	608, 732	136
Eggs (chicken).....	657, 958	978, 825	149
Dairy products.....	1, 896, 837	2, 287, 276	121
Wool.....	138, 195	155, 207	112
Other ⁷	48, 463	53, 368	110
Total livestock.....	6, 449, 799	8, 957, 364	139
Total crops and livestock.....	11, 168, 200	15, 441, 571	138
Government payments ⁸	585, 672	696, 748	119
Grand total.....	11, 753, 872	16, 138, 319	137

¹ Preliminary.

² Includes all berries except cranberries and strawberries.

³ Includes dates, kumquats, loquats, nectarines, papayas, persimmons, pineapples, pomegranates, prickly pears, and quinces, as well as apricots, apples, avocados, cherries, figs, grapes, lemons, limes, olives, prunes, plums, and pears in noncommercial States.

⁴ Includes all vegetables except dry edible beans, potatoes, and sweetpotatoes.

⁵ Includes broomcorn, peppermint, popcorn, vegetable seeds and nursery products, and greenhouse and forest products.

⁶ Includes chickens, broilers, turkeys, ducks, and geese.

⁷ Includes honey, horses, mules, and mohair.

⁸ Includes agricultural conservation, Sugar Act, and price adjustment payments to farmers.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1935-39=100) ²	Cost of living (1935-39=100) ³	1910-14=100					Prices paid, interest, and taxes	Farm wage rates
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in—					
					Living	Production	Living and production			
1925	90	126	125	151	163	147	156	170	176	
1926	96	131	126	146	162	146	155	168	179	
1927	95	128	124	139	160	144	153	166	179	
1928	99	127	123	141	160	148	155	168	179	
1929	110	134	122	139	159	147	154	167	180	
1930	91	110	119	126	150	141	146	160	167	
1931	75	85	109	107	128	123	126	140	130	
1932	58	59	98	95	108	109	108	122	96	
1933	69	61	92	96	108	108	108	118	85	
1934	75	76	96	109	122	123	122	128	95	
1935	87	87	98	117	124	127	125	130	103	
1936	103	100	99	118	123	125	124	128	111	
1937	113	117	103	126	128	136	131	134	126	
1938	89	91	101	115	122	125	123	127	125	
1939	108	105	99	113	120	122	121	125	123	
1940	123	119	100	115	121	124	122	126	126	
1941	156	166	105	127	131	131	131	134	154	
1942	180	232	116	144	154	⁵ 149	152	152	201	
1942—February	172	201	113	141	⁵ 148	⁵ 146	147	147	167	
March	172	203	114	142	150	149	150	150	177	
April	⁵ 173	212	115	144	152	149	151	151	177	
May	⁵ 174	219	116	144	153	150	152	152	183	
June	176	226	116	144	154	150	152	152	183	
July	⁵ 178	240	117	144	154	150	152	152	202	
August	183	244	118	145	155	150	153	152	202	
September	⁵ 186	247	118	145	157	151	154	153	202	
October	⁵ 190	250	119	146	158	151	155	154	220	
November	194	265	120	146	⁵ 160	151	156	155	220	
December	⁵ 197	272	120	147	⁵ 162	153	158	156	220	
1943—January	⁵ 200	—	121	149	163	155	160	158	223	
February	—	—	—	—	165	157	162	160	—	

Year and month	Index of prices received by farmers (August 1909-July 1941=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	141	153	163	156	92
1926	131	122	138	143	147	152	159	145	80
1927	128	128	114	121	140	165	144	139	84
1928	130	152	176	159	151	158	153	149	89
1929	120	144	141	149	156	157	162	146	87
1930	100	102	162	140	134	137	129	126	79
1931	63	63	98	117	92	108	100	87	62
1932	44	47	82	102	63	83	82	65	53
1933	62	64	74	105	60	82	75	70	59
1934	93	99	100	103	68	95	89	90	70
1935	103	101	91	125	117	108	117	108	85
1936	108	100	100	111	119	119	115	114	80
1937	126	95	122	123	132	124	111	121	90
1938	74	70	73	101	114	109	108	95	75
1939	72	73	77	105	110	104	94	92	74
1940	85	81	79	114	108	113	96	98	78
1941	96	113	92	144	144	131	122	122	91
1942	119	165	125	199	189	152	151	157	103
1942—February	121	180	98	161	173	147	135	145	99
March	122	151	111	136	180	144	130	146	97
April	120	158	118	158	190	142	131	150	99
May	120	159	131	152	189	143	134	152	100
June	116	153	148	169	191	141	137	161	99
July	115	155	131	200	193	144	145	154	101
August	115	151	126	250	200	161	156	163	107
September	119	156	129	191	195	166	166	163	107
October	117	158	134	226	200	165	173	169	110
November	117	160	127	238	197	171	178	169	109
December	124	162	151	293	196	175	183	178	114
1943—January	134	164	139	277	205	177	185	182	115
February	138	163	156	301	214	179	170	178	111

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised November 1941. ³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926-100, divided by its 1910-14 average of 68.5. ⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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FARM people are well aware of the Nation's need for all-out production of war crops this year. A new phase of the war is ahead, focusing on great offensives against the Axis strongholds of Europe and the Far East. Those campaigns, essential to victory, will require tremendous amounts of food and agricultural supplies. That farmers all realize the size of the food needs ahead and are responding to them is indicated clearly in the Crop Reporting Board's March report of farmers' intentions to plant. Acreage in many war crops seem likely to increase significantly, and total acreage in crops probably will surpass that of last year. There is still time for farmers to increase their acreages in some vital crops above the level indicated in the March report, of course. Present indications are that, with average yields for important food crops and with the continued upward trend in livestock production, total agricultural production in 1943 will be around 6 percent higher than in 1942. The amount of food crops needed, however, is virtually without limit, so that an increase above this figure would be of material help in winning the war.

Commodity Reviews

PRICES Wholesale and retail commodity prices have edged upward in recent months. Government price controls have been shifted gradually from a temporary toward a more nearly permanent basis, and many inequities under the temporary price ceilings have been eliminated.

Price rises in recent months have been greater for agricultural than for nonagricultural commodities. Some advances in nonagricultural prices have been permitted by the Office of Price Administration because of changed conditions, such as the increased cost of overland shipment of fuel, increased freight rates generally, additional Federal taxes levied on some commodities, higher wage costs incident to a longer work week in coal mining, and other reasons. In the case of agricultural commodities, the rises have been due in part to similar developments and in part to such factors as the absence of early price ceilings on many food commodities (at present over 95 percent of foods are subject to ceilings), correction of inequities imposed by temporary orders, and the need of price inducements to get added production sufficient for both war and civilian needs.

The rise in prices generally which has accompanied the development of the Office of Price Administration control program has been small, compared with what would have occurred without a program. This situation will also be true in the future. Canned foods is a case in point. Under rationing, civilians will be allowed a little more than 13 million cases of canned foods a month for the next 19 months, as against almost 30 million cases a month in 1941-42. With consumer income at record levels and still rising, there is little doubt, but that canned goods prices would rise sharply in the absence of price controls. As

it is, price ceilings and rationing will prevent large price increases.

The future course of commodity prices will not reflect to the usual extent the expected further rise in consumer income relative to available supplies of goods. Rather, as a result of price controls, consumers will find that an unusually large portion of their expanded incomes will be available for saving. After the war is over these large savings will be available for replenishing depleted stocks of consumer durable goods and other uses.

PRODUCTION As a result of the large demand for farm products for war and increased income of domestic consumers, the Department has been urging farmers to increase production of vital war products; more recently 1943 acreage restrictions have been waived for corn and wheat and relaxed for cotton.

If corn producers plant their 1943 goal for war crops they may plant an unrestricted acreage of corn and still be entitled to any Government benefits which they otherwise would get. Similarly wheat acreage restrictions are removed, although to qualify for parity payments growers must plant 90 percent of war crop goals. Cotton acreage allotments may be overplanted by 10 percent without loss of Government payments or loan privileges. This would permit plantings of 30 million acres of cotton, compared with 23.3 million in 1942. Cottonseed is an important source of edible oil and of protein feed. Corn is the principal feed used in fattening meat animals. Wheat, although used chiefly as a bread grain, can be substituted for feed grains when the latter are not in ample supply.

In encouraging farmers to produce to the limit of their abilities the De-

partment will support prices by means of various programs. The Department also stands ready to aid farmers with their labor and machinery problems. About twice as much new machinery as originally planned for 1943 is to be made available to farmers, as well as more parts for keeping existing machines in repair. A large part of this increase, however, will not be available to farmers until next fall.

Farm income from marketings increased slightly in January, after allowance for seasonal factors, and in February showed about the usual seasonal decrease. February income from marketings of grains, dairy products, and meat animals was higher than in January, after allowance for the usual seasonal changes, but income from cotton, tobacco, poultry products, and possibly truck crops probably was lower. Marketings of cotton were down more than usual from January, truck crop shipments were reduced by a freeze and prices of eggs and tobacco fell more than average.

With prospective demand for most agricultural products in 1943 sufficient to absorb maximum possible production at ceiling prices, farmers can expect to receive about the same price for a large as for a small output. There are a few exceptions to this general situation, but in these instances farmers will be entitled to parity price payments on basic commodities if market prices stay below parity.

FATS AND OILS Butter, margarine, lard, shortening, and cooking and salad oils for consumers are now under rationing along with meats and cheese. Use of food fats by commercial bakers and other manufacturers of food products also are rationed. The total allocation of food fats is equivalent to 33 pounds per capita for the 9-month period, April-December 1943, or 44 pounds per capita on annual basis. Because consumption was at a higher rate in the first quarter of 1943, actual use this year is expected to

total about 46 pounds per capita. This would compare with an average of about 50 pounds in the past 3 years and 48 pounds in the 5 years, 1935-39. These figures are on the basis of fat content except for butter, which is on actual weight basis.

Corn, cottonseed, peanut, and soybean oils on April 16 were placed under direct allocation to refiners and manufacturers by the Food Distribution Administration. Purpose of this action is to assure equitable distribution of the available supply of these primary oils to manufacturers. Factory working stocks are now at about a minimum level, and any further decline in these stocks would create a serious supply situation for many manufacturers unless the stocks were well distributed.

Production of fats and oils from domestic materials set a new high record of 10 billion pounds in 1942 compared with 9.4 billion pounds in 1941. Output from domestic materials may reach 11 billion pounds in 1943. Domestic disappearance of all primary fats and oils, including imported oils, totaled about 10.5 billion pounds in 1942.

Flaxseed prices advanced rapidly in February, March and early April, continuing the rise begun in December. In early April prices were above parity. Receipts at terminal markets have been relatively light in recent months, and a strong demand from crushers has been supplemented by bids from seed dealers. Prices of linseed oil advanced from December to April. Prices of most other fats and oils remain at ceiling levels.

LIVESTOCK Marketings of livestock for slaughter in regular commercial establishments in recent weeks have been running substantially less than a year earlier and smaller than anticipated marketings based upon the record large 1942 production of live animals. Although it is impossible to determine exactly how much livestock has been diverted

to black market outlets, the amount of meat deducted from the inspected supply by this slaughter has been quite large, and Government procurement agencies have had difficulty in meeting war requirements.

To obtain necessary control over the meat supply, so that adequate amounts of meat may be obtained for direct war needs and so that civilian supplies may be equitably distributed, several steps have been taken recently by the Department of Agriculture. These include:

(1) Effective April 1, all livestock dealers are required to obtain permits to buy and sell livestock, and must keep complete records of their operations.

(2) Also effective April 1, all livestock slaughterers who sell meat (this excludes farm slaughter for home use) must obtain slaughter permits and must stamp their permit number upon each wholesale cut of meat sold.

(3) Effective March 5, slaughterers operating under Federal inspection are required to set aside for war uses designated percentages of their production, these proportions to be determined from time to time in accordance with requirements and supply conditions. In addition to these steps taken by the Department of Agriculture, the Office of Price Administration has begun a vigorous enforcement campaign of supply and price control measures already in effect. Specific dollars-and-cents ceiling prices for pork, effective April 1, have been announced, and will be extended to other meats as soon as possible. Rationing of meat by the Office of Price Administration was begun March 29.

DAIRY PRODUCTS

Cheese stocks have been declining more rapidly than usual during recent months largely because of an increasing civilian consumption due to the limited meat supply, a greater than usual decline in cheese production, and substantial lend-lease

shipments. Cheese production is now increasing by somewhat more than the usual seasonal amount. Cheese consumption is being checked by rationing. During January, manufacturer's stocks of evaporated milk increased contraseasonally by 14 percent indicating that current production, plus stocks recently released by the Department, is more than sufficient to satisfy current demands. Butter rationing also was started in March.

The number of milk cows on farms, totaling 26,946,000 head on January 1, 1943, was 2 percent above a year earlier and slightly above the previous January 1 peak reached in 1934. Although the number of cows and heifers eliminated from herds during 1942 was the largest since the drought years, 1934-36, sufficient 1- to 2-year-old heifers were on hand at the beginning of 1942 to bring about the increase in cow numbers.

POULTRY AND EGGS

More than a half billion chickens were on farms in the United States on January 1, exclusive of numbers on specialized farms housing broilers and fryers. Demand for baby chicks this spring is unusually strong in all areas. From 10 to 15 percent more chickens probably will be raised on farms this year than last. These indicated increases are in line with the expansion needed to reach the suggested chicken goal.

Supplies of chicken for consumption will be materially larger this year than in 1942, with most of the increase showing up in the second 6 months. Supplies will be at a seasonally low level for the next few months. In early March, prices of all classes of poultry were at ceiling levels with demand at most markets considerably exceeding supplies. Unusually heavy withdrawals of poultry from storage continued during March and stocks (at 35 markets) averaged 50 percent below last year and somewhat below the 1932-41 average for March.

Egg production is responding to the favorable relationship between feed prices and egg prices. There were 15 percent more layers on farms this February than last, and the rate of production per bird averaged 3 percent higher. Total output of eggs was 19 percent above that in February 1942. Much of the increased supplies this year apparently went into current consumption. Dried egg production has been only slightly larger than a year earlier and the quantities of eggs stored and used for hatching in January and February were a little larger than last year. Consumers are taking larger supplies of eggs at prices 20 to 25 percent higher than last year. The demand for eggs, no doubt, will increase much further with the institution of meat rationing. Egg production will reach the seasonal peak in April but if drying operations increase to near-capacity and the necessary quantities are stored for drying later in the year, supplies for consumers will be little different from a year earlier and probably short of the demand at ceiling prices.

On March 6, Maximum Price Regulation 333 went into effect establishing maximum prices that can be charged retailers for eggs graded according to the new Consumer Grade specifications. It does not control prices at the farm level. The cents-per-dozen ceiling for eggs varies seasonally, increasing from the March-May low to a November peak. The maximum levels were about the same as the current levels. Wholesale prices of eggs, of customary grades, advanced slightly during the first half of March and in the middle of that month were slightly higher than in mid-February.

FEED Strong demand for corn was an important factor causing cash and future corn prices to advance about 5 cents per bushel during the past month, as permitted by the change in corn ceilings. Prices of oats and barley advanced 2 to 4 cents per bushel. Prices of wheat millfeeds ad-

vanced to the maximum levels at Kansas City and Minneapolis, reflecting a stronger demand for these feeds and the increase in sale price of government feed wheat. Prices of most of the high-protein feeds continue at ceiling levels with production inadequate for the strong demand.

The demand for all kinds of feed will continue stronger in 1943 than in 1942. Livestock numbers (grain-consuming units) on January 1 were 11 percent greater than a year earlier and further increases are expected in the number of hogs and poultry during 1943. Livestock prices have advanced about 25 percent during the past year. Supplies of feed grains, if properly distributed, will be sufficient to meet livestock requirements for the country as a whole during the greater part of 1943. In the latter part of 1943 and in 1944 the adequacy of feed supplies will depend on the 1943 growing season and the extent to which supplies of wheat are made available for feeding.

With feed prices favorable for livestock production in the Corn Belt and with livestock production increasing in this area, indications are that less grain than usual will be available in 1943-44 for shipment to other areas. Therefore, it is desirable for farmers in other sections, especially in the northeast and in the south, to grow as much of their 1943-44 feed requirements as possible.

Prices of nearly all livestock advanced to new high levels in February and March, reflecting seasonally reduced marketings and continued strong civilian and war demands for meat. In early March the top price for hogs at Chicago advanced to \$16 per 100 pounds, the highest level reached in 22 years; and Choice steers reached \$17.40, the highest price since 1937.

Cash income received by farmers for meat animals in 1942 totaled 4.9 billion dollars, 1.6 billion dollars more than in 1941, and nearly 1 billion dol-

lars more than the record 1918 cash income. Much of the increase over 1941 was due to the materially higher level of prices received by farmers, but increased sales of livestock also contributed to the larger income in 1942 than a year earlier.

WOOL Wool production this year may be slightly less than the record 1942 production of 460 million pounds (greasy shorn and pull basis), because of a 3 percent decline from a year ago in number of sheep on farms. Contracting of the 1943 clip has begun in Texas and several other western States. The average price received by producers for their 1942 wool clip was 40.1 cents per pound, 4.6 cents higher than in 1941, and the highest price since 1920. Cash income from wool in 1942 totaled 157 million dollars, compared with 139 million dollars in 1941. It was the largest income from wool in any year on record.

Mill consumption quotas for civilian fabrics during the period February

1 to July 1, 1943, were increased considerably by an amendment to the Wool Conservation Order M-73 February 19.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products ¹
1942			
January	149	146	102
February	145	147	99
March	146	150	97
April	150	151	99
May	152	152	100
June	151	152	99
July	154	152	101
August	163	152	107
September	163	153	107
October	169	154	110
November	169	155	109
December	178	156	114
1943			
January	182	158	115
February	178	160	111
March	182	161	113

¹ Ratio of prices received to prices paid, interest and taxes.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average, August 1909-July 1914	March average, 1910-14	March 1942	February 1943	March 1943	Parity price, March 1943
Wheat (bushel).....	88.4	88.9	105.1	119.5	122.7	142.3
Corn (bushel).....	64.2	61.3	78.4	90.4	94.8	103.4
Oats (bushel).....	39.9	40.3	51.9	55.5	58.4	64.2
Rice (bushel).....	81.3		169.3	174.7	180.2	130.0
Cotton (pound).....	12.4	12.4	18.06	19.68	19.91	19.95
Potatoes (bushel).....	69.7	67.5	103.9	125.7	145.1	116.1
Hay (ton).....	11.87	12.06	11.03	11.94	12.28	19.11
Soybeans (bushel).....			1.79	1.60	1.65	1.55
Peanuts (pound).....	4.80	4.8	6.03	6.45	6.83	7.73
Peanuts for oil (pound).....			4.05	4.03	3.82	3.78
Apples (bushel).....	.96	1.11	1.30	1.71	1.85	1.55
Hogs (hundredweight).....	7.27	7.51	12.51	14.63	14.67	11.70
Beef cattle (hundredweight).....	5.42	5.52	10.10	12.36	12.90	8.73
Veal calves (hundredweight).....	6.75	6.91	12.08	14.18	14.45	10.87
Lambs (hundredweight).....	5.88	6.13	10.62	13.77	13.98	9.47
Butterfat (pound).....	26.3	27.1	35.7	50.0	50.5	42.9
Milk, wholesale (100 pound).....	1.60	1.64	2.49	3.08	3.04	2.54
Chickens (pound).....	11.4	11.4	18.0	22.8	23.5	18.4
Eggs (dozen).....	21.5	19.6	25.8	34.2	34.0	28.4
Wool (pound).....	18.3	18.7	38.6	39.8	40.3	29.5
Tobacco:						
Fire-cured, types 21-24 (pound).....	13.6		12.9	17.0	16.1	13.9
Cigar binder, types 42-56.....	20.2		14.0	16.3	18.8	20.6

¹ Revised.

² Base price crop years 1919-28.

³ Adjusted for seasonality.

⁴ Preliminary.

WHEAT Wheat prices on March 9 generally were up 5 to 6 cents compared with mid-February. Buying was stimulated by legislative consideration providing for price ceilings at full parity. Prices of soft red winter wheat, the supply of which is very limited, are now above the parity equivalent at terminal markets. However, the continuation of relatively heavy marketings, which is probable as the result of prices which are attractive to growers with wheat under loan as well as holders of free wheat, would be expected to restrict advances of other types of wheat. In order to relieve the squeeze in the millers' margin brought about by advancing soft red wheat prices and the flour price ceiling, the price ceiling on this type of flour on March 2—was raised from what amounted to a wheat price equivalent of 92 percent of the February 15 parity to 100 percent. The flour ceilings on other types of wheat remain unchanged, the wheat price equivalents of which are about 86 percent of the February 15 parity. Compared with the calculated wheat price equivalents of the flour ceilings, on March 9 prices at Kansas City (hard red winter) were 6 cents above, at Minneapolis (hard red spring) 2 cents above, and at Portland (soft white) 3 cents below.

VEGETABLES Fresh vegetable prices generally continue at the highest levels existing for more than a decade. Prices of most fresh vegetables rose sharply following the mid-February frost. In an effort to protect consumers from this rapid price rise, the Office of Price Administration established maximum prices for snap beans, tomatoes, cabbage, carrots, and green peas at the highest price during the 5-day period, February 18-22; and on February 25 maximum prices were established for lettuce and spinach at the highest price charged during the 5-day period, February 20-24. These orders are temporary and will be replaced by

permanent orders within 60 days. Carrot, lettuce, and tomato prices for the first week in March were somewhat below the apparent ceiling levels while other fresh vegetables, subject to price control, were selling at ceiling levels.

Early frosts in winter vegetable areas have delayed the vegetable season. Replantings in Florida are expected to come into production about the middle of April, with volume production coming about May 1. Tonnage of commercial vegetables produced to date this season is expected to total 11 percent below last year's for the same period. This decrease is due to reductions in acreage harvested, partly because of frost damage, but primarily because of reduced plantings. Although April and May supplies of vegetables in general are expected to be more abundant than in earlier weeks, supplies of cabbage, cucumbers, egg plant, onions and lettuce are expected to be considerably smaller than those of last season.

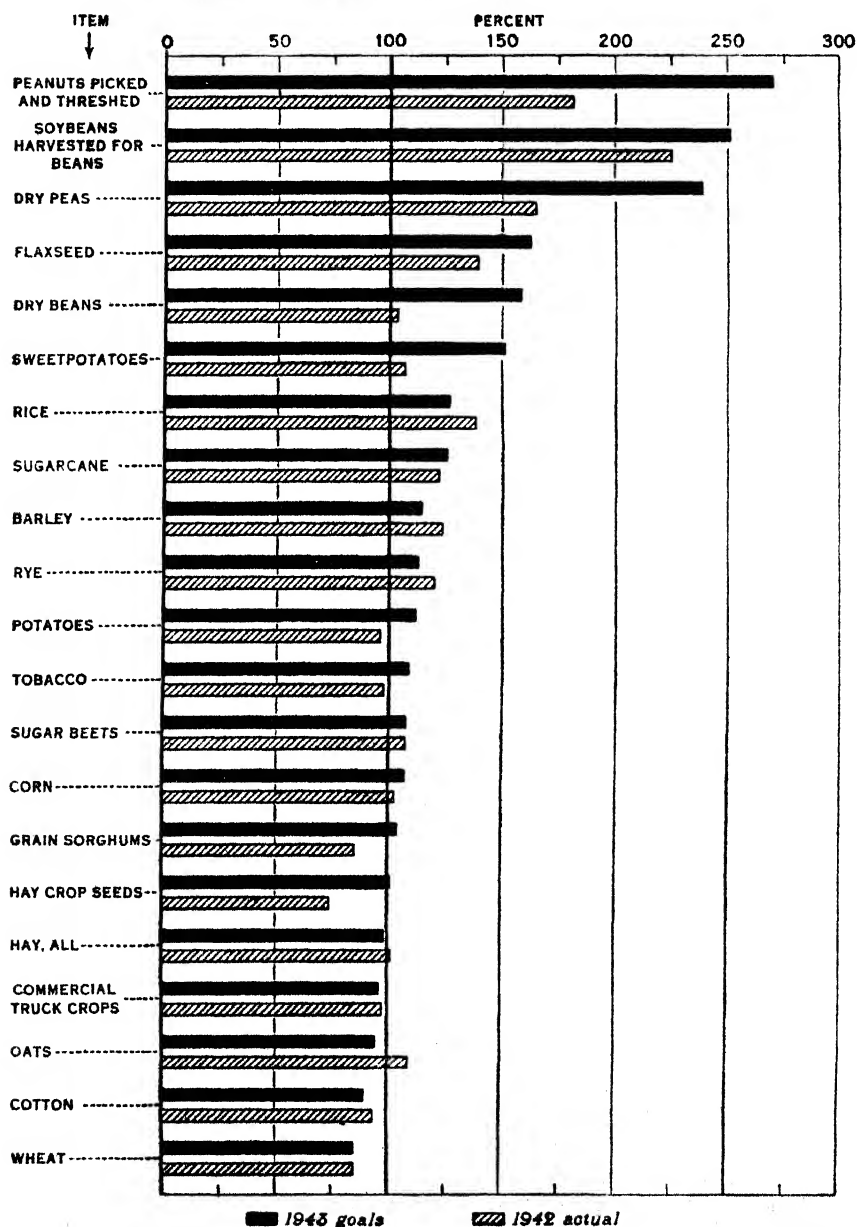
As rationing of processed vegetables probably will stimulate further the greatly increased demand for fresh vegetables, relatively short supplies of some vegetables during the next month may prevent prices from dropping below ceiling levels.

FRUITS Most fresh fruit prices continue far above the levels of a year ago and total carlot shipments have decreased from the peak movement of mid-March. The California orange crop was estimated on April 1 at 42.2 million boxes; the Florida orange and tangerine crop was 40 million boxes. The total orange and tangerine crop is expected to be about 2 percent larger than that produced last season. City auction prices of Florida oranges declined in the last half of March, while California orange prices remained steady to firm. All sales of California oranges were made at or near the established ceiling prices.

COTTON Mill consumption of cotton totaled 7.5 million running bales during the first 8 months of the current season. This compares with 7.3 million bales during the corresponding period last season—an increase of 3.5 percent. Continuation

of consumption at the average daily rate for the 8 months (Aug.-Mar.), would give a total consumption of about 11.3 million bales this season. This includes nearly 200,000 bales of foreign-grown cotton.

WARTIME SHIFTS IN CROP ACREAGE 1943 GOALS AND 1942 ACTUAL AS PERCENTAGES OF 1940



WAR AGAINST THE BLACK MARKET

A principal policy of the Department of Agriculture always has been to encourage the American way—a fair share of nutritious food for everybody. Lately this objective has received a crushing blow in the illegal traffic in meats; a black market which is snatching meat from the mouths of our fighting men and Allies. Those engaged in this shady and unpatriotic business are cutting sharply into the legitimate channels of livestock. Operating on a tremendous scale, they are like giant bloodsuckers, draining off the life blood of food supply.

As Secretary Wickard pointed out the other day, "Potentially the black markets represent not only lawlessness, but a threat to one of our most vital weapons of war. A waste of our food resources now may prolong the war and will cause the death of thousands upon thousands of American boys."

Black marketeers in meat include several types of lawbreakers. There is the small-town racketeer who slaughters more cattle or hogs than permitted under Government regulations, and who sells this meat to dealers and others who are willing to pay above market prices.

Then, there is the big operator, usually in our larger cities, who sells meats to butchers for prices higher than those permitted by the ceilings of the Office of Price Administration. Also, a few unscrupulous wholesalers and retailers up-grade meats they have bought in the black market and gouge the increased cost out of consumers.

Some dealers and farmers unknowingly have become tools of the black market operator, because they do not know the Government regulations and consequently do not realize their mistakes. They do not know that since October 1, 1942, their sales of dressed meat from their own slaughter were ordered limited to the same quantities they sold in the corresponding quarter of 1941. Those who did not slaughter

and sell meat in 1941 were not permitted to enter the business unless they obtained special quotas. A few farmers have been reported dressing their own meat and selling it for as high a price as the traffic will bear.

For the most part, however, farmers cannot be certain whether or not they are selling their livestock to the first link in the black market chain. The only indications pointing to the black market connections of a buyer may be his willingness to pay prices higher than the market, or his willingness to buy poor and diseased stock at attractive prices.

Two far-reaching orders have been issued by the Secretary of Agriculture to correct the dangerous meat situation. They became effective midnight March 31. One requires all slaughterers, including farmers and local butchers, to obtain permits to slaughter cattle, calves, hogs, sheep, or lambs for the sale of meat. The second order requires all livestock dealers and handlers to obtain permits to buy and sell livestock. These orders are needed to get the black market under control. The Department intends to enforce these orders to the limit of its resources. If additional legal measures are needed, or if changes in the orders are necessary, the Government will take prompt action to provide them.

To insure the greatest possible success of the slaughter and livestock dealer permit plans, they will be administered by State and County War Boards and Federal meat inspectors and graders. This task demands the wholehearted cooperation of every farmer, every consumer, every packer, and every dealer.

The Slaughter Permit Order sets up three classes of slaughterers:

1. "Local slaughterers" are those who produce less than a half million pounds of meat per calendar quarter, but who in 1941 slaughtered livestock

with a total live weight of more than 300,000 pounds (any slaughterer whose meat production per quarter exceeded one-half million pounds was required to register with the OPA as a quota slaughterer under the Meat Restriction Order which went into effect, October 1, 1942).

2. "Butchers" are those persons other than farm slaughterers who in 1941 slaughtered livestock with a total live weight of less than 300,000 pounds.

3. "Farm slaughterers" are those persons who slaughtered livestock for the sale of meat who are resident operators of farms and chiefly engaged in the production of agricultural commodities and whose slaughter of livestock for the sale of meat in 1941 did not exceed 10,000 pounds, live weight.

THE quota for each local slaughterer is 80 percent of his monthly dressed weight slaughter in 1941 for beef, veal, and lamb, including mutton, and live weight of hogs slaughtered. The quota for each butcher is his choice of the total live weight of livestock he slaughtered in each month of 1941, or the number of each of the four types of livestock he slaughtered in each month. Permit issuing agencies are authorized to issue the following quotas to farmers who did not slaughter livestock in 1941, or who do not furnish any record of their 1941 slaughter: (1) 300 pounds of meat, or (2) any part of the meat produced from the slaughter of three animals which may include not more than one head of cattle. Those farm slaughterers who want larger slaughter sales quotas than these amounts are limited to their choice of (1) the total live weight of livestock they slaughtered in the corresponding quarter of 1941, or (2) number of each of the four types of livestock they slaughtered in the corresponding quarter of 1941.

Anyone who slaughters livestock and sells meat will be required to obtain a permit. Farmers who slaughter meat animals must have permits if they intend to sell all or part of their meat.

Farmers get their permits from their County Agricultural War Boards. In large cities butchers and meat packers get their slaughter permits from the designated meat inspection or grading offices of the U. S. Department of Agriculture. Butchers and local slaughterers in smaller cities will apply to County War Boards.

Each slaughterer is issued an individual permit number. This phase of the plan is specifically designed to sound the death knell of the "black market" operators. With every wholesale cut of meat sold in the open market marked with a slaughter permit number plainly stamped upon it, no illegal meat can be placed in the butcher's coolers or showcases without being spotted immediately.

BESIDES obeying the new government rulings, here's what the farmer can do to fight the black market: Each time he buys or sells any livestock he should keep accurate records of the deal. Even if he buys or sells only one head, even if he is buying or selling purebred animals to be used only as breeding stock, he should record each sale.

Chances are that most farmers already are doing this, for good business sense and the income tax laws dictate such a policy. Each time a farmer buys or sells a meat animal he must record the number of their head and their description and weight, the name and address of the man to whom he sold them, the date and the price. He should keep these records regularly and stand ready to show them to responsible officials. This helps provide a check on black market operators.

Another way for the farmer to help out is by reporting suspicious characters to his War Board. If a dealer approaches a farmer and offers a price out of line with regular market prices, he may be one who is planning to bypass legal meat marketing channels. The farmer should record the license number of his truck and write down a careful description of the dealer, for information of the local War Board.

If the dealer is dishonest, his dealings are hurting the farmer far more than the farmer will be helped by the extra price he gets for his animals.

Farmers who, in response to the Government's call, have produced more and more livestock, are working harder, longer hours to do it, should remember this: A large part of this work and expense in raising these animals is wasted if they go to black market slaughterers. The black marketers often use little care in taking off the hide, perhaps ruining it for leather purposes. Sometimes they burn the hides to destroy evidence. They may throw away the hearts, livers, heads, and other byproducts which a legitimate packing plant could sell as variety meats or transform into badly needed antitoxins and soap. A lot of meat may spoil, for good refrigeration under such black market conditions is practically impossible. Every animal slaughtered illegally sabotages the war program.

FARMERS should continue to produce meat animals at top speed, with the knowledge that every pound of beef, pork, veal, lamb and mutton is important to victory. If every livestock producer makes it his personal

responsibility to see that his meat animals get into honest hands, he will be taking a long step toward stamping out black markets. This worse-than-dangerous market not only has seriously diverted meat supplies which should have fed our armed forces and Allies but also it has kept large amounts of needed food from getting to civilian war workers.

Now, how can the farmer help in the Government's rationing plan? The farmer does not give ration stamps for the meat, butter, lard or any other of the rationed commodities his family consumes from his own production. He is consuming his own property.

But if the farmer sells rationed commodities to either consumers or retailers, he must collect ration stamps for what he sells whether it be meat butter, lard, or whatnot. The stamps must be mailed or taken to his local Rationing Board.

In brief, the farmer must take every precaution to see that his produce—and ration stamps—do not fall into the hands of racketeers and support the Black Market.

WILLIAM O. FRASER,
Food Distribution Administration.

PROSPECTIVE CIVILIAN FOOD SUPPLY

THE annual March "Prospective Plantings" survey indicates nearly a 4 percent increase over 1942 in acreage of the major spring crops to be planted in 1943. Assuming average yields and a continuation of the present trend in livestock production, the production of food for human consumption in 1943 will be about 30 percent larger than the yearly average for 1935-39 and about 3 percent larger than the production in 1942. The production in 1942 was the largest on record. Twenty to twenty-five percent of the 1943 production will be allocated to lend-lease and our military forces and the remaining 75 to 80 percent will be allocated to civilians.

The civilian share of the total food in 1943 will result in a per capita consumption about as large as the yearly average in 1935-39 and with rationing of most of the important foods in effect, the supply will be more evenly distributed than it was in 1935-39.

The present estimates of the civilian food supply for 1943 are, of course, subject to major revisions. The prospective planted acreage of food crops, on which present estimates are partly based, does not constitute a forecast of the actual acreage to be planted this year. Changes in the acreage intended to be planted can be made before planting-time, and strenuous efforts are being made this year to

induce farmers to increase acreage of various food crops such as peanuts, sugar plants, dry beans, and potatoes, above the levels indicated by the Intentions Report. The estimates are also contingent upon the weather. Above average weather such as that in 1942 would make a substantial contribution to our food supplies. Below average weather would, of course, reduce the total production below expectations.

Military developments will also have a direct bearing on the amount of food that civilians will have in the near future. As parts of occupied Europe are reconquered by the Allies, large supplies of food will be required to feed the liberated peoples. While a considerable portion of the needed foods will be supplied by our Allies and neutral countries, the United States will have to bear a substantial part of this burden. The major relief requirements will undoubtedly consist of cereals. However, to supplement the deficient diets of the people in the reoccupied regions, large quantities of the "protective" foods such as milk, meat, eggs, vegetables, and fruits will have to be shipped to them. In addition, great quantities of seed and other farm materials will need to be furnished so that local production can be expanded as rapidly as possible.

A COMPARISON of the consumption in 1935-39 with the present tentative estimates of the civilian supply in 1943 shows that only the per capita supply of fish, butter, canned and dried fruits, canned vegetables, dry edible beans, and sugar will be lower this year than in the pre-war period. On the other hand, the per capita supply available to civilians of poultry, eggs, fluid milk and cream, total fats and oils, fresh citrus fruits, and canned juices is expected to be larger. In addition, the supply of meats is expected to be about as large as in 1935-39 and the supply of cereals (except for rice) is plentiful.

Although present estimates point to a civilian per capita food supply about as large as in the pre-war period, the 1943 food situation as a whole will be vastly different from the pre-war situation. Now there are shortages in the major food commodities and Government rationing of many foods is necessary. In 1935-39 shortages of this kind did not exist and rationing of food was not considered necessary. The greatest single factor responsible for this changed situation is the increased purchasing power and the resulting increased civilian demand for food at the prevailing ceiling prices. Because of increased employment and larger pay rolls consumers spendable income in 1943 is expected to be about 90 percent larger than in 1935-39. While in normal times a substantial part of this increased income would have been spent on durable goods, such expenditures will be restricted this year as many of the durable goods are no longer being manufactured. More of the increased income, therefore, becomes available for the purchase of food. Without price controls and with a limited food supply the additional purchasing power would be absorbed by rising prices which would adjust the demand to the supply. However, with price ceilings placed on most foods the demand greatly exceeds the supply and shortages result.

The discrepancy between the demand and the supply is illustrated by the following examples: During the period 1935-39, the average per capita consumption of all meats was about 126 pounds. The supply available in 1943 will be about as large. However, present estimates indicate that the average civilian demand for meats in 1943 at ceiling prices may be as high as 160 pounds per capita. Again, the average per capita consumption of all food fats and oils in 1935-39 was about 48 pounds. The estimated demand in 1943 is about 55 pounds per capita, while the civilian

supply of fats and oils for the year as a whole is expected to be about 46 pounds.

PROBABLE shortages in substitute foods which are not taken into consideration in estimates of demand tend to further increase the gap between the effective demand and the available supply. For example, because of relatively high ceiling prices and because, normally, cheese consumption is not an important factor in the American diet, the estimated demand for cheese in 1943 is only about 7 pounds per capita. However, this estimate assumes that the supply of substitute foods will be adequate. But with the expected shortages in meat, the demand for cheese may be as high as 10 pounds per capita. The amount of cheese that will be available for civilians in 1943 is 5.7 pounds per capita. Similarly, the civilian demand for chickens in 1943 is estimated at about 26 pounds per capita (dressed weight). As a result of the increased production the civilian per capita supply is expected to be about 28 pounds per capita. However, considering the shortages in meats and other protein foods the demand for chickens probably will exceed even this record supply.

This unusually large civilian demand and the limited food supply available to civilians creates local and over-all shortages. Although, with approximately the same supply, shortages of this kind were not experienced in 1935-39, these shortages in 1943 are none the less real to the millions of people who are for the first time in financial position to buy the quantity and quality of foods they have always desired. The fact that the great majority of civilians are involved in strenuous war work magnifies the hardships caused by the shortages. These hardships during the war period

cannot be avoided, but they can be alleviated through rationing of the scarce commodities. Rationing of scarce commodities does not increase the average per capita supply, but it does tend to distribute it more evenly, and by relieving the pressure on price ceilings it makes price controls more effective.

Thus it appears that while military and lend-lease requirements account for a large portion of our total food supply, these requirements cannot be given as the main reason for rationing of foods. Rationing is necessary primarily because of the unusually large civilian demand. With price ceilings placed on foods, but without rationing, distribution of the supply to consumers would be highly irregular and uneven. With a large demand, food stocks would be depleted before they could be replenished and consumption could not be maintained at a constant level throughout the year as no reserves could be built up during the season of high production. For the millions of people who have recently moved into the upper income groups, the ration allotments will be less than what they would like to buy at present ceiling prices, but more than they could afford previously.

M. A. GIRSHICK,

Bureau of Agricultural Economics.

Apparent civilian consumption per capita, 1935-39 average and estimated 1943

Commodity	1935-39	1943
	Pounds	Pounds
Total meats.....	126	124
Fish.....	13.0	8.6
Poultry.....	20.7	32.3
Eggs.....	37.5	39.9
Fluid milk and cream.....	342.3	396.7
Butter.....	16.8	12.7
Fats and oils.....	31.5	33.7
Fresh citrus fruits.....	48.2	53.9
Canned fruits.....	15.0	7.6
Canned juice.....	5.2	5.9
Dried fruits.....	6.1	4.1

FARM WAGE STABILIZATION

WITH farm wages commanding considerable attention these days because of their bearing on the farm labor supply problem, a review of the farm wage stabilization order and its background is in order.

Under the act of October 2, 1942 (Public Law 729, 77th Cong.), which is entitled "An Act to amend the Emergency Price Control Act of 1942, to aid in preventing inflation and for other purposes", the President was authorized to issue a general order stabilizing prices, wages and salaries affecting the cost of living. Such stabilization was to be, as far as practicable, on the basis of the levels which existed on September 15, 1942.

The act further provided that the President may thereafter provide for making adjustments with respect to prices, wages and salaries to the extent that he finds it necessary to aid in effective prosecution of the war or to correct gross inequities.

First action taken under the authority of this act was the issuance of Executive Order No. 9250, which gave to the National War Labor Board the authority and duty to administer the wage and salary policy. The order had the effect of placing a stop-order or a "freeze" on wages as of October 3, 1942, which was its effective date. Thereafter all wages as defined in the order could not be increased except upon the War Labor Board's authority.

THIS order does not directly define wages but does define salaries to mean remuneration for services regularly paid on a weekly, monthly, or annual basis and hence, wages would be all compensation for services otherwise paid, particularly those on a daily, hourly, or piece-rate basis.

Executive Order No. 9250 was followed, on October 27, by an order or directive of Economic Stabilization Director Byrnes, and approved by the President, which did two major things

in the structure of the administration of stabilization: (1) It divided the jurisdiction over the administration of the wage and salary policy between the National War Labor Board and the Commissioner of Internal Revenue; and (2) it placed a "freeze" on salaries as of October 27.

The War Labor Board retained jurisdiction under the October 27 order over all wage payments and over all salary payments not exceeding \$5,000 per annum, if the employee is either represented in his relations with his employer by a duly recognized or certified labor organization or is other than a *bona fide* executive, administrative, or professional employee. Conversely, therefore, the Commissioner of Internal Revenue has jurisdiction over all salary payments in excess of \$5,000 and all salary payments less than \$5,000, where the employee is in a *bona fide* executive, administrative, or professional capacity and is not represented in his employer relations by a duly recognized or certified labor organization.

This was the general status of the wage and salary stabilization system when, on November 30, the Director of Economic Stabilization, with approval of the President, amended the October 27 order to transfer jurisdiction with regard to agricultural labor to the Secretary of Agriculture.

TWO most notable features of the November 30 order are: (1) The definition of "agricultural labor" which has the effect of severing jurisdiction between the Secretary of Agriculture, on the one hand, and on the other, the War Labor Board or Commissioner of Internal Revenue, at \$2,400 per annum; and (2) to provide that, until action is taken by the Secretary to the contrary, wages and salaries of agricultural labor may be increased without approval.

The order defines "agricultural labor" to mean "persons working on

farms and engaged in producing agricultural commodities, whose salary or wage payments are not in excess of \$2,400 per annum." The Secretary is authorized to issue, by regulations, necessary interpretations of this term. He also is given power corresponding to the other agencies in the field to determine whether any salary or wage payments to agricultural labor are made in contravention of the act of October 2 or of any rulings, orders, or regulations thereunder.

Authority of the War Labor Board over disputes between employers and employees relating to salaries is expressly preserved. In view of this provision, if the employer is not willing to make a wage increase, he is not required to do so by the order of November 30, but rather, the dispute between the employer and employees would be referred to the War Labor Board which has full authority to make the settlement. Like, also, the authority of the War Labor Board and the Commissioner of Internal Revenue, any determination by the Secretary of Agriculture is conclusive under this authority for any purpose for which the level of salaries paid to employees is material.

The proviso of the order which currently is of the most purport is Section 4001.5 (b), which provides, in substance, that wage and salary increases for agricultural labor are not to be found in violation of the act or of any rules, orders, or regulations thereunder, unless and until the Secretary determines and gives public notice thereof, that, with respect to areas, crops, classes of employers, or otherwise, increases in salaries or wages for agricultural labor may no longer be made without the approval of the Secretary.

AS reasons for this general "unfreezing," the section recites that it is done: "Considering that the general level of salaries and wages for agricultural labor is substandard, that a wide disparity now exists between salaries and wages paid labor in agriculture and salaries and wages paid

labor in other essential war industries, and that the retention and recruitment of agricultural labor is of prime necessity in supplying the United Nations with needed foods and fibers, and in order to correct and adjust these gross inequities and to aid in the effective prosecution of the war. * * *"

Formal interpretations of the order are contemplated and may be issued from time to time by the Secretary. The first official determination of maximum wages under Section 4001.5 (b) was made on April 14, when the War Food Administration established maximum wage rates for work in connection with harvesting of asparagus for canning and freezing in Sacramento, San Joaquin, Yolo, Solano, and Contra Costa Counties, California.

This fact should be brought out in a discussion of the farm wage stabilization order: Even if there were no such order, the overwhelming majority of farmers have eight or less employees. Hence, employees on such farms would be exempt from wage stabilization restrictions even without the creation of this jurisdiction of the Secretary over farm wages, since general orders of the War Labor Board and regulations of the Commissioner of Internal Revenue have excluded payments to employees in establishments employing eight or less persons from the wage and salary "freeze."

Another fact that needs to be emphasized is that where the wages or salaries of agricultural workers exceed \$2,400 per annum, the jurisdiction of the Secretary ends and the application for the wage or salary increase must be made to the War Labor Board or the Bureau of Internal Revenue, depending upon the nature of the wage or salary. It is notable, in this connection, that many, if not a majority of such cases, would probably go to the Bureau of Internal Revenue since a farm employee earning more than \$2,400 per annum is usually a salaried supervisory employee.

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War Food Administration

SHORT CUTS IN FARM WORK

SCARCITY of farm labor and limitations on the supply of farm machinery are creating an interest among farmers in a subject with which industry has been familiar for several years but which is fairly new to agriculture in this country. That subject is work simplification.

Industry has used time and motion study and work simplification and similar methods to increase the effectiveness of their workers to a very considerable amount. In Europe, farm experts have applied these principles to agriculture, with good results. A few experimental studies in this country have indicated their value.

Some farmers do about twice as much work as others and seem to do it with no more effort. The reasons for this difference in production per man in industry have been found and reduced to simple work rules. These rules, though used extensively in industry, have never been made generally available to farmers. They have used labor-saving machinery, but when it comes to saving body energy and fatigue, only a few farmers have been able to work out for themselves the simpler and easier methods.

THE human body can only deliver about one-tenth of one horsepower continuously for a long period of time—about as much as is needed for generating a 75-watt light globe. In times like these, when production per man needs to be about twice what it has been in the past, it becomes the patriotic responsibility of every farmer to not only use his own energy to the very best advantage but also to help to develop the abilities of hired help and members of his own family to use their energy to the best possible advantage. Listed below are the rules that have made work simpler and easier in industry. It is suggested that each farmer ask himself these questions about everything he does:

1. Is the job absolutely necessary? What would happen if I didn't do it?

Indiana tomato farmers are growing tomatoes without transplanting, thus cutting out one whole operation and increasing the yield.

Some New Jersey poultrymen are eliminating drop boards, or putting in sloping ones and cleaning out the chicken house only two or three times a year. Others are putting feed bins in poultry houses, thereby making the carrying of feed unnecessary.

2. Can this job be done as a part of some other job, so that both jobs can be done in same time it would take to accomplish one?

Many farmers, especially those with the larger tractors, are tying two or three farm tools together, thus shortening tillage time. For example, a harrow behind a plow, a harrow behind the disk. Farmers using horses even tie one team on behind another implement.

3. Can the job be made easier and simpler? Can the hand and foot travel be reduced? Are both hands used to the best advantage?

It is only natural when cleaning a brooder house, for example, to begin near the door and work toward the far corner, carrying the trash and litter over the chicks and scaring them. A simpler and easier method is to clean out the far corner first. Bed it down and drive the chicks upon the clean litter, then go ahead and clean out the rest of the house. This saves steps and makes the limited energy of a man on a farm go much farther. Every step saved can be used on other important work; wasted steps are useless. Just because a bench, harness hook, hay chute, or a path to the barn has always been in the same place, does not

prove that it is in the best place. Planning barn chores prevents back-tracking, going empty-handed, and other lost motion. Livestock responds to system and smooth operations in doing work.

Saving steps is a part of a motion-saving attitude. Anyone who wishes to save human energy must have this attitude as a part of his thought processes.

MUCH bending and suffering can be saved by giving consideration to the following simple rules.

1. Always keep the back as near straight as possible.
2. When lifting shift the load from the back to the big leg muscles.
3. When heavy loads must be carried, balance them as well as

possible and try to keep the back nearly straight.

4. Many loads can be slid, rolled, or dragged short distances to avoid lifting. Sometimes levers may be used. Skids, ropes, hillsides, and other advantages to prevent undue fatigue may be employed.
5. These principles, applied when practicable, greatly increase production and lessen fatigue.

The slower, easy-going farmer whose every action is studied and effective, working steadily throughout an average working day, is generally the one who has the greatest return.

DAN M. BRAUM,
*Office of Personnel,
U. S. Department of Agriculture,
March 11, 1943.*

FARM LAND VALUES CLIMB

SHARPLY increased farm-real-estate values as well as a continued heavy demand for farm properties characterized developments in the farm-real-estate market during the past year. Preliminary results of the Annual Farm Real Estate Survey by the Bureau of Agricultural Economics indicate an increase in values of 9 percent for the Nation as a whole during the year ended March 1, 1943. This increase brings the index of values to 99 percent of the pre-World War I base period (1912-14=100), compared with 91 on March 1 a year earlier, 85 in 1941, and 73 in 1933.

The 9-percent increase in values for the past year is the largest annual value rise since the World War I period, being practically equal to the annual increases from 1917 to 1919, and is significantly exceeded only by the 21-percent increase which occurred during the year ended March 1920.

Land value increases during the last year were widespread with some advance reported for each of the 48 States. Increases of 12 percent were reported for the East South Central group of States; 10-percent increases occurred in the Middle Atlantic,

West North Central, Mountain, and Pacific Divisions. The increases in other areas ranged from 7 to 9 percent except in the New England States where values rose only 3 percent. While values for the country as a whole are now only 1 percent below the pre-World War I base, values in 30 States are equal to or above this base period level. Eleven States reported value increases amounting to 12 percent or more and 14 States showed increases ranging from 10 to 12 percent.

THE year just past marked the second consecutive year with farm-real-estate value increases reported for each State. During this 2-year period, values for the country as a whole increased more than 16 percent. Compared with 1941 levels, values in two geographic divisions—the East North Central and East South Central—are higher by 20 and 23 percent respectively. Increases for this two-year period in four geographic divisions ranged from 15 to 18 percent, 2 divisions increased 13 percent, and 1 division 5 percent.

Values in Kentucky have increased 29 percent and in Indiana 27 percent since 1941. Increases of 20 to 24 percent occurred in 13 States, 15 to 19 percent in 16 States, 10 to 14 percent in 11 States and less than 10 percent in 6 States.

Since the start of the war, there have been strong opposing forces operating in the farm-real-estate market. The major value-stimulating influence has been the high level of demand for agricultural products, with resulting high farm prices and incomes. Prices received by farmers during 1942 averaged almost 29 percent above 1941 and 60 percent above 1940. Increases in farm prices during the year were only partly offset by increased costs, so that purchasing power of farm products is currently higher than at any time since immediately following the first World War.

Encouragement of expansion in production of many commodities and unusually favorable weather conditions resulted in a record volume of agricultural production in 1942. This record crop, marketed at favorable prices, raised farmers' cash income from marketings and government payments to the estimated total of 16.1 billion dollars, or 37 percent more than in 1941 and 77 percent above 1940. The increased farm income of the past 2 years has enabled many farmers, both owners and tenants, to accumulate sufficient funds to buy land.

INCREASING demands for agricultural products resulting from expanding military and lend-lease requirements as well as higher domestic demands assure favorable agricultural prices for the duration. Thus, the immediately prospective high returns from farming make the purchase of farms attractive to both farmer and nonfarmer investors. The general belief that ownership of a farm is a hedge against inflation also has been a factor in investor purchases. While some of these buyers may sell again within the next few years, so far there

seems to have been relatively little short-run speculative activity such as accompanied the upsurge in values in 1919 and 1920.

The above-mentioned influences are of a type which have tended to increase the demand for land, while favorable returns have made individual owners more reluctant to sell except at increased prices. This factor has become increasingly significant as the recent large holdings of lending agencies have been depleted in most areas.

Factors operating to curb the effects of the value-stimulating influences include not only those of immediate significance in farm operation, but also those likely to be important during the next few years. Thus, the effect of the favorable farm product price situation on the farm real-estate market is somewhat dampened by existing or expected farm labor and machinery shortages. Labor shortages are likely to be especially acute in areas having seasonal labor requirements, and land values in these areas may show relatively little response to continued high prices for the products produced.

HIGHER costs and shortages of other commodities used in production, farm commodity price controls, transportation difficulties, conservative loan policies by the major institutional lenders, and the confused post-war outlook have had and probably will continue to have a depressing influence on farm land values. Likewise, heavier taxation, accelerated rates of debt retirement, and further increased absorption of purchasing power through purchase of war bonds can have a distinct curbing influence on the farm-real-estate market.

Another factor influencing the land market, and one which should continue to be important, is the recollection of the course taken by land values during and immediately following World War I and the results of the "land boom" in ensuing years. At that time,

failure to appreciate fully the abnormalities of the prevailing income and price levels and the unlikelihood of their continuance appears to have

been the underlying cause of a host of difficulties later on.

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FROZEN FRUITS AND VEGETABLES

START of canned goods rationing has brought sharply home the fact that supplies of canned fruits and vegetables for civilian consumption will be limited for the rest of the war.

This prospect is based on three conditions: (1) Supplies of tin and steel for use in making tin cans are restricted, (2) Requirements for canned goods for military and lend-lease purposes have greatly increased, and (3) With incomes much higher than in recent years, and with prices regulated by ceilings, consumers are financially able to purchase more canned goods than usual.

Fruits and vegetables can be processed without using tin cans. Glass jars have been substituted in some cases, although it is difficult to obtain with glass jars the satisfactory vacuum seal for the "sanitary pack" required for most items. Several new-type glass jars and sealing devices are being worked on, but the short supply of rubber and machinery for converting to glass limits the amount of expansion possible here. Dehydration, another form of processing, is undergoing tremendous wartime expansion, but the need for dried fruits and vegetables for military and lend-lease use is so great that little or none of the increased production from this source can be made available to civilians.

So far as off-season supplies for civilian consumption are concerned, therefore, freezing now appears to be the form of processing fruits and vegetables which offers the best prospects for large expansion during the war. Consumers in many parts of the country are familiar with various brands of frozen fruits and vegetables that have been on the market for some time. Products to be frozen are selected, washed, and otherwise prepared, and

then "quick-frozen." The finished products are distributed through various wholesale and retail channels, packed in cartons designed to promote retention of moisture and other desirable qualities during storage.

ALTHOUGH the volume of frozen fruits and vegetables sold in past years has been large, and is expanding rapidly, it represents a very small proportion of the total consumption of fruits and vegetables. To expand the established industry enough to make up for the deficit in canned goods for civilians, of course, would require large amounts of critical materials. In addition, other major difficulties would be encountered. Many of these difficulties might be avoided, however, and larger frozen food production be obtained, through converting a portion of the facilities of the ice cream industry to the production and distribution of frozen fruits and vegetables.

The ice cream industry, like the canning industry, has been running into difficulties arising out of the shortages of raw materials. Sugar, butterfat, milk solids, and other ingredients of ice cream are among the foods for which the supply situation is most critical. The Government has had to limit the use of these materials by ice cream manufacturers in 1943 to approximately 65 percent of the quantities consumed during the corresponding months of 1942. Although manufacturers, by making adjustments in the butterfat and milk solids content of their product and by increasing their output of ices and sherbets, will be able to bring their total gallonage above the indicated percentage of last year's sales, a considerable proportion of the facilities of the industry will be available for other uses. Many manu-

facturers might find it highly advantageous to have a new line of business to supplement their regular operations. This is particularly true of products to be sold during the winter.

THE International Association of Ice Cream Manufacturers and several of its member firms have co-operated with the Division of Marketing and Transportation Research, Bureau of Agricultural Economics, in tests to determine the practicability of using the existing equipment for this purpose, and to ascertain the amount of equipment that is available. These tests indicate that freezing of fruits and vegetables in present plants is quite practicable, and that satisfactory products can be obtained. Products frozen by various methods have been tested, with encouraging results. The freezing can be done in a number of ways. Appearance of the product is excellent, and it is unlikely that consumers could perceive any difference between products frozen with special equipment and those frozen with equipment already possessed by ice cream plants.

To determine the costs of such processing in ice cream manufacturing establishments is difficult, because all operations to date have been conducted purely on an experimental basis. There is reason to believe, however, that these costs would be low enough to permit ready movement of the products into consuming channels.

From the standpoint of distribution to consumers, the ice cream industry is well situated for handling frozen foods. Many grocery stores have refrigerator cabinets for the sale of ice cream, and other types of stores also could handle the product, if necessary. Trucks now used for ice cream could be used for delivery of frozen fruits and vegetables. As the distribution facilities of ice cream companies are not used to capacity during the winter months, when fresh fruits and vegetables are scarcest, additional manpower requirements would be relatively small.

TWO problems must be solved, however, before there can be any substantial conversion of the ice cream industry to the handling of fruits and vegetables. The first of these is the difficulty of storing the products from the summer and fall seasons in which they are produced into the winter and spring months when they would be consumed. The industry's total capacity for storage at temperatures of zero or below is large enough to handle a tremendous quantity of fruits and vegetables. Although the hardening rooms of the ice cream industry are fully utilized only during a short period of the year, the storing of fruits and vegetables in them would make it practically impossible to continue the regular ice cream trade. Consequently, some other means of storing the products would have to be found.

A solution to this problem may lie in the use of the tremendous amount of unused ice-storage facilities available in practically all parts of the country. Changes in the ice-manufacturing industry in recent years have left it with much unused storage and refrigerating capacity. Although it would take considerable lumber and some amount of scarce materials to convert these storage facilities, the money cost would not be prohibitive and the engineering problems would be relatively simple.

The second and more important of these problems is the obtaining of adequate supplies of raw fruits and vegetables and their proper preparation for freezing. The ice cream companies do not have fully suitable equipment for cleaning, blanching, and otherwise preparing the products for freezing, and in any event would be reluctant to carry on such operations in their plants. Odors from the vegetables being prepared might contaminate the cream and other products used in ice cream operations. For these reasons, it might be desirable to use the already available facilities of the canning industry for these purposes. The canners, too, would be best able to effect arrangements with producers of

fruits and vegetables, with whom they are already in contact and accustomed to deal. The canners have all of the equipment necessary for handling the products preparatory to final processing. Some canners, however, might not be anxious to cooperate in such an endeavor, since frozen foods would offer possible peacetime competition with their own business.

POSSIBILITIES for conversion of the ice cream industry to handling fruits and vegetables are further complicated by the difficulty of providing a sufficient quantity of raw materials. Farm labor of the kind required for the production and harvesting of fruits and vegetables is scarce. Alternative opportunities for the use of land and labor are plentiful and attractive, and arrangements generally must be made well in advance of the producing season. For this reason, principally, it is doubtful that any large volume of frozen fruits and vegetables will be handled by the ice cream industry in 1943. Some individual ice cream manufacturers, however, may be able

because of particular local situations to obtain adequate supplies of fruits and vegetables for freezing.

The number able to do this would be much larger if arrangements could be made for converting ice storage warehouses to the storage of the frozen products. The problems of financing, amortization, etc., involved are similar to those found in connection with many other wartime conversions.

In any event, the experiments which have been conducted furnish a basis for effective action designed to utilize the fruit and vegetable crops of 1944 and subsequent years, in case the war should be prolonged and it becomes necessary to reduce still further the quantities of tin made available for civilian use. The ice cream industry, by further pilot plant operations in the freezing of fruits and vegetables in 1943, will place itself in a position to cooperate effectively in any such matter in case this kind of shift is necessary in 1944.

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ACREAGE PROSPECTS THIS YEAR

FARMERS on March 1 were planning increases over their 1942 acreages of beans, oil seeds, corn and various other crops to meet war production goals, according to the annual March prospective plantings survey of the Crop Reporting Board. Total crop acreage, as result, would be larger than last year.

A strong effort to increase production notwithstanding difficulties is reported from all parts of the country. Since crop conditions now appear generally favorable except for a shortage of surface moisture in parts of the Southwest, crop losses in 1943 probably will be moderate. Total acreage of crops harvested this year may be the largest since 1932. The March 1 reports, however, should be considered as representing plans at that time, before farmers had made full adjust-

ment to recent changes in the agricultural program.

If farmers' plans on March 1 are reflected in production as completely as usual, acreages planted to beans and peas will be increased 16 and 35 percent, respectively, over those planted last year. On the same basis, acreages of soybeans, peanuts, and flaxseed, needed for oils and oilmeals will be increased 10, 12½, and 29 percent respectively. These increases would result in by far the largest acreages on record for each of these 5 crops. Acreages in potatoes and sweetpotatoes—important war foods—will be increased 14 and 15 percent respectively. The acreage of corn, grown chiefly for feeding livestock, will be increased more than 6 percent to nearly 97,000,000 acres.

Farmers have planted or were planning almost the same acreages of oats, barley, and rice as were planted for harvest last year. They were planning to increase spring wheat 4 percent, but this increase would only partially offset the decrease in seeded acreage of winter wheat. They planned to increase the total acreage of sorghums about 3 percent, with a greatly increased proportion of the sorghum acreage being grain sorghum varieties, and a smaller percentage in sweet sorghums.

ACREAGE planned for tame hay crops is about as large as that cut last year. However, farmers in the Corn Belt plan to reduce hay about three-fourths million acres in order to increase corn. Farmers in the South will increase their hay crops by saving the vines from their increased acreage of peanuts. Tobacco acreage prospects indicate an increase of less than 2 percent. Chiefly because of the substitution of peanuts and soybeans for cowpeas in the South, farmers expect to reduce cowpea acreage by 13 percent. Acreage of sugar beets probably will be reduced nearly 30 percent, because of the large amount of labor required to take care of sugar beets, the favorable prospects offered by alternative war crops, and other factors.

Total acreage planned for these crops amounts to about 279,000,000 acres, an increase of nearly 10,000,000 acres over last year. More than half this increase is explained by the increase of nearly 6 million acres planned for corn. Another 3.3 million acres of the increase comes from the larger acreages in the 3 oilseeds—soybeans, peanuts, and flaxseed. These increases are not likely to cause a corresponding increase in the total acreage of crops, as there will probably be less winter wheat and rye left for harvest than last year.

Farmers on March 1 apparently were planning to plant close to the goals or suggested acreages of the Department for wheat, soybeans for

beans, grain sorghum, tobacco, and hay. They planned to exceed the recommended acreages for flaxseed, rice, oats, and barley by more than 7 million acres, but would fall a little short of the goals for corn and potatoes and considerably short for peanuts, sugar beets, dry beans, dry peas, and sweetpotatoes. Upward adjustments in acreage were still possible, however, especially as many farmers made returns before getting full information on the removal of restrictions on wheat, and before the announcement of permission to increase planted acreage of cotton up to 110 percent of allotments and to increase acreages in certain types of tobacco. Other considerations may also bring about readjustments after March 1, as has happened in other years.

RATHER sharp regional differences exist in the adjustments that farmers are making to meet the new conditions. In the North Atlantic States, Michigan and Wisconsin, acreages of potatoes and canning vegetables and some specialized crops are expected to be increased. Some local increases in feed crops may be made here, but farmers and their families are finding it hard to earn as much on farms as they can in the nearby factories. As result, the number of farms is tending to decline and the acreage of crops will be maintained with difficulty. In California, where the labor problem is even more acute, a reduction of almost 3 percent is in prospect. Similar conditions prevail elsewhere in areas near booming industrial plants and munition factories.

In the main Corn Belt, farmers plan substantial increases in corn and soybeans and decreases in hay and pasture. Most farmers operating large acreages in this area have tractors and power equipment that can be worked additional hours if necessary. In most of the area the demand for additional cropland is strong and crop acreage is likely to be one of the largest in history. In the Great Plains area west of the main Corn Belt, a sub-

stantially increased acreage of crops is planned, but the total will probably be 11 million acres below the level in predrought years.

In the South, plans on March 1 called for large increases in peanuts and sweetpotatoes and a slight further increase in the total crop acreage. Reports on early vegetables in the Southern States, Arizona and California, including about a third of the commercial vegetables grown for fresh market in the United States, show plantings 11 percent below the acreage harvested last year. The chief reductions are indicated in the early crops of onions, tomatoes, peas, and cabbage.

IN much of western Texas and Oklahoma, however, the acreage planned cannot be planted unless the present lack of surface moisture is adequately relieved by planting time. West of the Rockies, the strong demand for hay and grain for maintaining the increased numbers of livestock, the demand for the specialty crops of this area, and the generally favorable irrigation water supply are helping to increase crop acreages above those of previous years, except in localities where shortage of labor is acute.

Farm manpower is now at the lowest level in the 19 years for which estimates are available. As the number of horses and mules on the farms is also lower than at any time in 60 years and few new tractors are available, the extra field work required this year can be accomplished only by working available mechanical equipment more hours per week. Although there will be a smaller than usual reserve of men and machines with which to meet emergency situations, farmers appear to be confident that planting and cultivating of most of the crop increases now planned can be accomplished under average conditions. The reduction of manpower on the farms is no doubt considerable, even though more members of the farm families than ordinarily

are lending a hand. The strong demand for tractors and tractor equipment in all parts of the country indicates that a larger number of tractors could be operated than are available.

Problems of harvesting the slightly increased acreage of crops this year may be serious if yields are again high. With just average weather, however, crop yields per acre are likely to be about 12 percent below the exceptionally high records set last year. Allowing for this probability of lower yields, for indications of a slightly increased acreage harvested, and for a slight shift towards more valuable crops the present outlook is for aggregate crop production this season of about 9 percent below last year's output. This would not mean a corresponding decrease in the amount of labor required for harvesting, but it would tend to keep the harvest labor problem local and seasonal in nature, rather than national.

In spite of the indicated decrease in crop production, total food production probably will be somewhat larger than last year, because of the large increase expected in livestock production.

PROSPECTIVE planted acreage of corn in 1943 is 96,827,000 acres, the largest since 1937. This acreage would be 6 percent more than the 91,011,000 acres planted in 1942, but nearly 2 percent less than the 10-year (1932-41) average of 98,524,000 acres. Substantial increases in acreage are indicated for the important corn-growing States of the northern part of the country, but elsewhere changes in acreage from last year were varied--with decreases in prospect for some Southern States. The prospective acreage exceeds the goal of 95,000,000 acres announced in December, but is below the 100,000,000 acres requested by the Department when corn acreage allotments were lifted.

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Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1935-39=100) ²	Cost of living (1935-39=100) ³	1910-14=100					Prices paid, interest, and taxes	Farm wage rates
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in—			Living and production		
					Living	Production	Living and production			
1925.....	90	126	125	151	163	147	166	170	176	
1926.....	96	131	126	146	162	146	155	168	179	
1927.....	95	127	124	139	160	144	153	166	179	
1928.....	99	126	123	141	160	148	155	168	179	
1929.....	110	134	122	139	159	147	154	167	180	
1930.....	91	110	119	126	150	141	146	160	167	
1931.....	75	84	109	107	128	123	126	140	130	
1932.....	58	58	98	95	108	109	108	122	96	
1933.....	69	61	92	96	108	108	108	118	85	
1934.....	75	76	96	109	122	123	122	128	95	
1935.....	87	86	98	117	124	127	125	130	103	
1936.....	103	100	99	118	123	125	124	128	111	
1937.....	113	117	103	126	128	130	131	134	126	
1938.....	89	91	101	115	122	125	123	127	125	
1939.....	108	105	99	113	120	122	121	125	123	
1940.....	123	119	100	115	121	124	122	128	126	
1941.....	156	169	105	127	131	131	131	134	154	
1942.....	180	238	116	144	154	149	152	152	201	
1942—March.....	172	208	114	142	150	149	150	150	167	
April.....	173	218	115	144	152	149	151	151	177	
May.....	174	225	116	144	153	150	152	152	.....
June.....	176	234	116	144	154	150	152	152	183	
July.....	178	247	117	144	154	150	152	152	202	
August.....	183	251	118	145	155	150	153	152	.....
September.....	186	255	118	145	157	151	154	153	.....
October.....	190	259	119	146	158	151	155	154	220	
November.....	194	273	120	146	160	151	156	155	.....
December.....	197	279	120	147	162	153	158	158	.....
1943—January.....	199	291	121	149	163	155	160	158	223	
February.....	203	286	121	150	165	157	162	160	.....
March.....	.....	.....	.....	151	167	158	163	161	.....

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	128	144	121	140	155	144	139	84
1928.....	130	152	176	159	151	158	183	149	89
1929.....	120	144	141	149	155	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	62
1932.....	44	47	82	102	63	83	82	65	53
1933.....	62	64	74	105	60	82	75	70	59
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	116	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	98	98	78
1941.....	96	113	92	144	144	131	122	122	91
1942.....	119	155	125	199	189	152	151	157	103
1942—March.....	122	151	111	136	180	144	130	146	97
April.....	120	158	118	158	190	142	131	150	99
May.....	120	159	131	152	189	143	134	152	100
June.....	116	153	148	169	191	141	137	151	99
July.....	115	155	131	200	193	144	145	154	101
August.....	115	151	126	256	200	151	156	163	107
September.....	119	156	129	191	195	156	166	163	107
October.....	117	158	134	226	200	165	173	169	110
November.....	117	160	127	238	197	171	178	169	109
December.....	124	162	151	293	196	175	183	178	114
1943—January.....	134	164	139	277	205	177	185	182	115
February.....	138	163	155	301	214	179	170	178	111
March.....	143	166	172	302	218	180	171	182	113

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised March 1943.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is based on volume only, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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NOW in progress at Hot Springs, Va., is the United Nations Food Conference, the first broad-scale international meeting of its kind ever held. Attended by representatives from countries throughout the world, including all major allied powers, this conference represents the first beginnings of a world-wide approach toward determining the food requirements and deficiencies of the war and post-war era * * * With Chester C. Davis drafted by the President to serve as Food Administrator, the Department of Agriculture's war programs are pushing ahead with plans for expanded food production * * * Government efforts to control the rising costs of living and to prevent runaway price increases, backed up by the President's "hold the line" order of April 8, are becoming increasingly effective. Control of prices and elimination of black market operations at home are equally important to the civilian population and the armed forces * * * Despite the heavy migration of farm workers to cities and the fighting forces since the war started, the total number of workers employed in agriculture is about as large as before the war. Replacements for workers who have left the farms consist mainly of farm family members who previously did little or no work on the farms.

Commodity Reviews

FEED: Prospects for 1943-44

Feed prospects are for production of corn, oats, barley, and grain sorghums totaling 11 percent less than in 1942 (assuming March 1 intended acreage and average yields). The 1943-44 supply may be 10 to 15 percent smaller in relation to the number of livestock on farms than that for the current feeding year. Reduced reserve stocks, increased grain imports, and reduced feeding per grain consuming animal unit are possibilities.

From January through March disappearance of corn was 14 percent greater than for the corresponding period of 1942, and disappearance of oats was 23 percent greater. If the present rate of disappearance continues, carry-over of corn on October 1 will be less than 500 million bushels. The carry-over on July 1 may be around 225 million bushels. Stocks of corn and oats on April 1 were 6 percent larger this year than last, but livestock numbers are increasing. Supplies of wheat millfeeds and high-protein feeds, though large, have been short of demand.

In view of feed prospects, the War Food Administration on April 10 advised hog producers not to increase breedings for fall litters by more than 15 percent above 1942. An increase of only 5 percent, combined with the large spring crop, would meet the overall goal of 15 percent more pigs in 1943.

WFA also announced that steps are being taken to import feed to supplement supplies in the Northeastern, Southeastern and Southwestern coastal areas; that loans outstanding on 1938-41 corn were being called; and that, if these measures do not provide enough corn for immediate industrial requirements, commercial stocks will be requisitioned for use by essential war industries.

Commodity Credit Corporation by

April 30 had loaned an average of 77 cents a bushel on 56 million bushels of 1942 corn. A year earlier, nearly twice as much corn had been placed under loan. Loans outstanding April 30 on the 1942 crops of other grains included, roughly, 7.4 million bushels of barley; 552,000 bushels of flaxseed; 30,000 bushels of grain sorghums; 4.1 million bushels of rye.

Linseed oil meal, cake, and pellets were put under price control in April, with specific dollars-and-cents ceilings set at points below price levels then current. The crusher's maximum price at Minneapolis, set by OPA, was \$40 a ton for meal or cake in bulk and \$43.50 per ton sacked. Ceilings for pea size meal and pellets are \$1.50 a ton above those for sacked meal. A differential of \$1 a ton is allowed where shipments are in less than carload lots. Jobbers are allowed maximum mark-ups of 50 cents a ton in carload lots and \$1 in less than carload lots. The wholesalers' maximum mark up is \$2.50 and the retailers', \$5.50.

The Office of Price Administration raised the ceiling price of yellow corn 5 cents a bushel effective April 14, and announced there would be no further increase in corn price ceilings during the crop year ending September 30. This action increased ceiling prices for yellow corn produced in the central part of the United States, corn at principal terminal markets, and peak quotations for corn futures on the grain exchanges.

"Designed to encourage the immediate movement of corn," OPA explained, "the move should relieve the present acute market shortage of the yellow cereal for feeding livestock and industrial processing."

No increase in corn prices was permitted on the east or west coasts. In order to make corn available without increasing poultry and dairy feed prices in New England, the Atlantic seaboard and the Southeast, Commod-

ity Credit Corporation will sell corn in those areas at the old ceiling prices applicable there.

Initial purchase of 7½ million bushels of Canadian wheat for feed, to help maintain dairy and poultry production in New England and the Middle Atlantic States, was announced April 21 by the War Food Administration.

INCOME: Marketings

Cash income from farm marketings in the first three months of 1943 totaled 3,690 million dollars—35 percent more than in the same period of 1942. Income from all groups of farm products increased sharply. Returns from oil-bearing crops were nearly 3 times as great as a year earlier. Income from cotton and wheat also was markedly higher. Poultry and eggs made the largest gain, in the livestock group but returns from meat animals and dairy products also have been substantially higher.

Government payments in the first quarter of 1943 were 271 million dollars—almost exactly the same as in the first quarter of 1942.

DAIRYING: Labor Plan

Return of qualified workers to dairy farms is the goal of a plan announced early in April by the Selective Service Bureau of the War Manpower Commission. Points in the plan include cooperation with USDA War Boards in getting experienced men between 18 and 45, who are deferred through physical handicap, and other men over 45, to return to dairy farms if they are not engaged in other "essential" work; making men up to 45 with or without dependents liable for military service unless they enter agriculture or some other essential activity before specified dates; agreement with the War Department that men discharged after reaching their 38th birthday, except under certain conditions, will be subject to recall for military service unless they engage in agriculture or other essential work.

Production: Milk production in the second quarter may be slightly larger this year than last, although the prospective tight feed situation could cause some decline in total milk output in the last half of this year. The total quantity of dairy products available per person for civilians, on a butterfat basis, may be about 10 percent below last year's record high. Quantities of fluid milk and cream, however, may be slightly greater.

Milk production on farms from January through March totaled 26,912 million pounds—about 1 percent above production in the same months last year. On March 15, the price of butterfat averaged 118 percent of parity, and the price of milk 120 percent of parity. The pounds of feed (as a national average) which could be purchased with 1 pound of butterfat totaled 26.7, compared with 27.5 pounds a month earlier, 21.4 pounds a year earlier, and the 1922-41 average for March of 24.8 pounds. The milk-feed ratio March 15 was 1.38, as compared to 1.43 a month earlier, 1.26 a year earlier, and 1.21, the 20-year average for March.

Cheese: Tentative new U. S. standards for grades of American Cheddar cheese announced April 29 by the War Food Administration specify appropriate characteristics for each grade of cheese at different ages. For grading purposes, fresh or current make of cheese is approximately 1 month old or less; medium cured refers to cheese approximately 1 to 5 months old; and cured or aged cheese is over 5 months old.

POULTRY AND EGGS

Hens laid 21.5 billion eggs from January through April—15 percent more than in the same period last year, and a new record. Production per hen in March set a new high for the month. That for April was the third highest on record. The number of young chickens on farms May 1 was 12 percent larger than on May 1, 1942.

In terms of national averages, a

dozen eggs on March 15 would buy 17.7 pounds of poultry feed—3.3 pounds more than the 1932-41 March average, and the most on record for that month. A pound of chickens would buy 12.3 pounds of feed—or 0.4 pound less than the 10-year April average. Therefore, at ceiling prices it has been more profitable to produce eggs than fowl, and sales of the latter in January-April were relatively small. For 1943 as a whole, supplies of chickens are expected to be much larger than in 1942. Most of the increase in marketings will occur from July through December.

Seasonal increases in egg ceiling prices to retailers from spring to fall, authorized by OPA, were not much different from seasonal price increases of recent years. Nevertheless, the demand for storing increased considerably when the ceilings were announced, and wholesale prices for shell eggs advanced relative to ceiling prices to retailers and relative to ceiling prices for dried eggs. The Food Distribution Administration on March 23 ordered all shell eggs in cold storage May 31 to be set aside for governmental agencies, announced that no shell eggs could be stored after May 31, except for Government purchase. It reserved the entire 1943 production of spray process dried whole eggs for delivery to governmental agencies.

LIVESTOCK: Ceilings Studied

Procedures for placing ceiling prices on live hogs if and when necessary were being worked out in mid-April, the War Food Administration announced. Consideration also was being given to alternate methods of bringing about a readjustment of live cattle prices.

WFA indicated that such measures would be put into effect if meat rationing and the campaign against black markets does not bring about a downward adjustment in live animal prices, relieving the squeeze between them and wholesale meat prices within "a reasonable time." Hog prices at the

time of the announcement were above levels expected to be reflected by the wholesale pork ceilings, but declined after the announcement was made.

The support price for hogs was increased from \$13.25 to \$13.75 per hundred pounds, until September 30, 1944.

VEGETABLES: Price Supports

Dry Beans, Peas: New support prices were announced April 8 for dry beans and dry peas. At the same time, payments for Irish potatoes and truck crops were announced for that part of the production which is between 90 and 110 percent of the farm goals.

New support price for U. S. No. 1 dry beans of the 1943 crop is \$6.50 per hundred pounds, cleaned and bagged in carlots, f. o. b. carrier, at country shipping points, for Pea, Great Northern, Small White, Flat Small White, Pinto, Pink, Small Red and Cranberry varieties; and \$7.50 per hundred pounds for Lima, Baby Lima, Light Red Kidney, Dark Red Kidney and Western Red Kidney. In addition, Commodity Credit Corporation will make loans on thrasher-run beans at \$5.50 per hundred pounds for U. S. No. 1, \$5.35 for U. S. No. 2, and \$5.10 for U. S. No. 3. No. 2 beans will be bought at a discount of 15 cents per hundred from the prices for No. 1 beans. If the weather makes it necessary to buy No. 3 beans in order to have enough, they will be bought at a discount of 40 cents from the prices for No. 1 beans.

To encourage harvesting of additional blackeye peas in the South, the Department of Agriculture will buy them at \$5.75 per hundred pounds of cleaned and bagged U. S. No. 1 peas, delivered to points designated by county AAA committees. Purchase price will be \$5.60 per hundred pounds for U. S. No. 2 peas, and \$5.35 per hundred for U. S. No. 3 peas.

New support price for smooth dry edible peas grown in the Northwest is \$5.65 per hundred pounds for U. S.

No. 1, and \$5.40 for U. S. No. 2, f. o. b. carrier at country shipping points. Growers also will be offered a loan on thresher-run smooth dry edible peas of specified varieties at \$4.50 per hundred pounds for U. S. No. 1, and at \$4.25 for U. S. No. 2, with discounts for lower grades.

TRUCK CROPS: Production

Here are highlights of a report issued early in April on the indicated production of commercial truck crops for fresh market:

Lima beans, Florida, about the same as in 1942 and 34 percent above the 1932-41 average. *Snap beans*, early (2) States (California, Florida, Texas), 35 percent above 1942 and 27 percent above the 1932-41 average. *Beets*, second early, (Louisiana, South Carolina), 77 percent of 1942 and 54 percent of 1932-41. *Cabbage*, second early (Alabama, Georgia—south, Louisiana, Mississippi, North Carolina, South Carolina and Virginia) around 76 percent of 1942 and 64 percent of 1932-41. *Carrots*, second early (Arizona, California, Louisiana), 80 percent above 1942 and 91 percent above 1932-41. *Celery*, second early sections of California and Florida, around 88 percent of 1942 and about the same as 1932-41. *Onions*, early, (Texas, Louisiana, California) 31 percent below 1942 and slightly less than the 1932-41 average. *Green peas*, second early (California—other, Georgia, Mississippi, South Carolina), 20 percent above 1942 and 69 percent of 1932-41. Commercial early *Irish potatoes*, early (1) sections of North Florida and Texas Lower Valley, 79 percent of 1942 and 87 percent of 1932-41. *Spinach*, second early (Arkansas, Illinois, Maryland, Missouri, New Jersey, Pennsylvania, Virginia, and Washington), 4 percent above 1942 and about the same as the 1932-41 average. *Strawberries*, second early (Arkansas, California—south, North Carolina, South Carolina, Tennessee, Virginia), 70 percent of 1942 and slightly below 1932-41.

WHEAT: Outlook

Wheat production in 1943 may total around 685 million bushels. Production of winter wheat indicated by the May 1 crop report was around 515 million bushels. The total assumes average yields of spring wheat on around 14,700,000 planted acres as indicated by the March prospective plantings report. Production of all wheat last year was 981 million bushels and the 1932-41 average was nearly 738 million. Other estimates: carryover July 1, 1943, about 615 million bushels; carryover July 1, 1942, 632 million; domestic supplies in 1943-44, 1,300 million bushels; domestic supplies in 1942-43, 1,613 million bushels; disappearance in 1943-44, roughly 1.1 billion bushels; disappearance in 1942-43, 1 billion—the largest since 1920. Carryover July 1, 1944, may be below 300 million bushels or less.

Unusually heavy disappearance is expected to result from use of more wheat for food, along with use for feed and alcohol. Any wheat that may be imported probably will be for feed.

Commodity Credit Corporation had loaned nearly \$459 million on 406 million bushels of 1942 wheat, by April 30—45 percent of it stored on farms and 55 percent in warehouses. Loans have averaged \$1.13 per bushel, including some transportation to warehouses. More than 106 million bushels of this wheat had been redeemed by April 30, and nearly 4.9 million had been delivered to CCC.

Sale of the additional 100 million bushels of Government-owned wheat for feed that was authorized by law, began in late March. Prices at which the wheat was offered by CCC range from minimums of 93 cents in Southern Minnesota and 94 cents in Iowa, up to \$1.09 delivered in New England, Florida and Southern California.

Wheat stocks on April 1 totaled 901 million bushels, consisting of 328 million on farms, 175 million in interior mills and elevators, 212 million in commercial centers, 123 million in

merchant mills, and 63 million bushels of CCC wheat in steel and wood binds and in transit. Of the total of 901 million bushels, 578 million either were owned by CCC or were under loan on April 1.

FATS, OILS: Price Supports

On April 8 the War Food Administration announced these changes in support prices: SOYBEANS—To \$1.80 per bushel for yellow soybeans having 14 percent moisture content, from the \$1.70 a bushel previously announced; FLAXSEED—To \$2.85 a bushel for U. S. No. 1, basis Minneapolis, from \$2.70 per bushel; PEANUTS—To an average of \$140 a ton for Virginia and Spanish type peanuts and \$130 per ton for runner type, from \$132 for Virginia and Spanish type and \$122 for runner type.

Premiums and discounts for other grades of soybeans and other grades and locations in the case of flaxseed will be the same as previously announced. Farmers storing soybeans

or flaxseed on the farm under a CCC loan will receive a storage payment of 7 cents a bushel. Prices to farmers for peanuts of any particular type or

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products ¹
1942			
January.....	149	146	102
February.....	145	147	99
March.....	146	150	97
April.....	150	151	99
May.....	152	152	100
June.....	151	152	99
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	169	154	110
November.....	169	155	109
December.....	178	156	114
1943			
January.....	182	158	115
February.....	178	160	111
March.....	182	161	113
April.....	185	162	114

¹ Ratio of prices received to prices paid, interest, and taxes.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		April 1942	March 1943	April 1943	Parity price, April 1943
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....cents..	88.4	83.3	99.7	122.7	122.3	143.2
Corn (bushel).....do....	64.2	65.6	79.7	94.8	100.2	104.0
Oats (bushel).....do....	39.9	32.5	51.8	58.4	61.1	64.6
Rice (bushel).....do....	81.3	72.7	179.8	180.2	182.5	181.7
Cotton (pound).....do....	12.4	10.04	19.03	19.91	20.13	20.9
Potatoes (bushel).....do....	69.7	75.3	118.2	145.1	166.8	117.2
Hay (ton).....dollars..	11.87	8.33	11.13	12.28	12.61	19.23
Soybeans (bushel).....do....	.....	.92	1.76	1.65	1.67	1.56
Peanuts (pound).....cents..	4.80	3.48	6.25	6.83	6.98	7.78
Peanuts for oil (pound).....do....	.....	.....	4.10	3.82	.....	8.61
Apples (bushel).....dollars..	.96	.89	1.41	1.85	2.15	1.56
Hogs (hundredweight).....do....	7.27	8.38	13.48	14.67	14.35	11.78
Beef cattle (hundredweight).....do....	5.42	6.56	10.59	12.80	13.03	8.78
Veal calves (hundredweight).....do....	6.75	7.80	12.15	14.45	14.25	10.94
Lambs (hundredweight).....do....	5.88	7.79	10.85	13.93	13.88	9.53
Butterfat (pound).....cents..	26.3	29.1	37.0	50.5	51.3	42.2
Milk, wholesale (100 pound).....dollars..	1.60	19.1	24.1	8.05	8.02	2.43
Chickens (pound).....cents..	11.4	14.9	18.4	28.5	24.6	18.5
Eggs (dozen).....do....	21.5	21.7	25.6	34.0	33.7	28.8
Wool (pound).....do....	18.3	23.8	39.7	40.3	41.2	29.6
Tobacco:						
Fire-cured, types 21-24 (pound).....do....	13.6	10.1	11.2	16.1	14.2	14.0

¹ Revised.

² Adjusted for seasonality.

³ Preliminary.

⁴ Base price crop years 1919-28.

grade will be the same in all areas. There will be no marketing cards and no "quota" or "excess" peanuts under the one-price system this year.

On April 9, the Department of Agriculture authorized a distribution payment of \$10 a ton to farmers who delivered "excess" or oil peanuts to designated grower agencies under the 1942 peanut program. Outstanding indebtedness to the Government for 1942 seed will be subtracted from this payment. The distribution payment represents a conservative estimate of surplus above cost of operating the 1942 program up to March 22. An additional payment may be available when the 1942 Peanut Marketing Program is completed.

Millings of farmers' stock peanuts during the 1942-43 season, up to March 31, totaled 1,207 million pounds—55 percent more than the 778 million pounds milled to the same date last season. Mills and warehouses held 603 million pounds of farmers' stock peanuts on March 31, compared with 368 million pounds on the same date last year.

RICE: Acreage

Rice growers on March 1 intended to plant the same total acreage as last year. With 1938-42 average yields this acreage would yield a crop of about 73 million bushels—7 million above the record crop of last year, when yields were cut by storms. A crop this large, with the small carry-over, would provide for prospective exports and shipments, average domestic consumption and a moderate reserve at the end of the marketing season.

COTTON: Consumption

Mill consumption of cotton from August through April totaled 8½ million bales, compared to consumption of 8¼ million bales in the same period a year earlier. Consumption of American-Egyptian cotton from August through April totaled slightly less than 88,000 bales—13 percent more

than in the same period last year. Stocks in consuming establishments, in public storage and at compresses on April 30 totaled 13 million bales—less than 1 percent under that of a year earlier. Included in the above were 45,763 bales of American-Egyptian cotton on April 30 this year, compared with 33,747 bales a year earlier.

Commodity Credit Corporation loans had been completed by May 1 on 3,019,000 bales of 1942 crop cotton and repayments had been made on 353,000 bales of this cotton. Loans on the 1941 crop through May 2, 1942, covered 2,213,000 bales.

Cotton was selling virtually at parity on April 15.

Organized cotton improvement groups may apply for free classification and market news service for the 1943 crop, at any time until August. Applications must be filed with offices of the Food Distribution Administration at Atlanta, Dallas, El Paso, or San Francisco.

Indemnity payments to manufacturers of bale wrappers made of cotton were increased from 35 cents to 40 cents on each wrapper manufactured and sold after April 1. Purpose is to assure manufacture of enough wrappers for the 1943 crop. Patterns must be manufactured or sold before July 1, to qualify for indemnity payments.

A program to stabilize the price of cotton was announced April 24, jointly by the Office of Price Administration and the War Food Administration. It provides for sales of Commodity Credit Corporation stocks at a price of 21.38 for Middling 1½ inch, which was the 10-market average price the day before issuance of the President's hold-the-line order. CCC may call its loans on cotton if the particular varieties so held are needed to meet current requirements. The announcement also said immediate steps would be taken to prepare a permanent price regulation for raw cotton to supplement when necessary the ceilings established by sales of CCC cotton and, if necessary, a temporary price ceiling

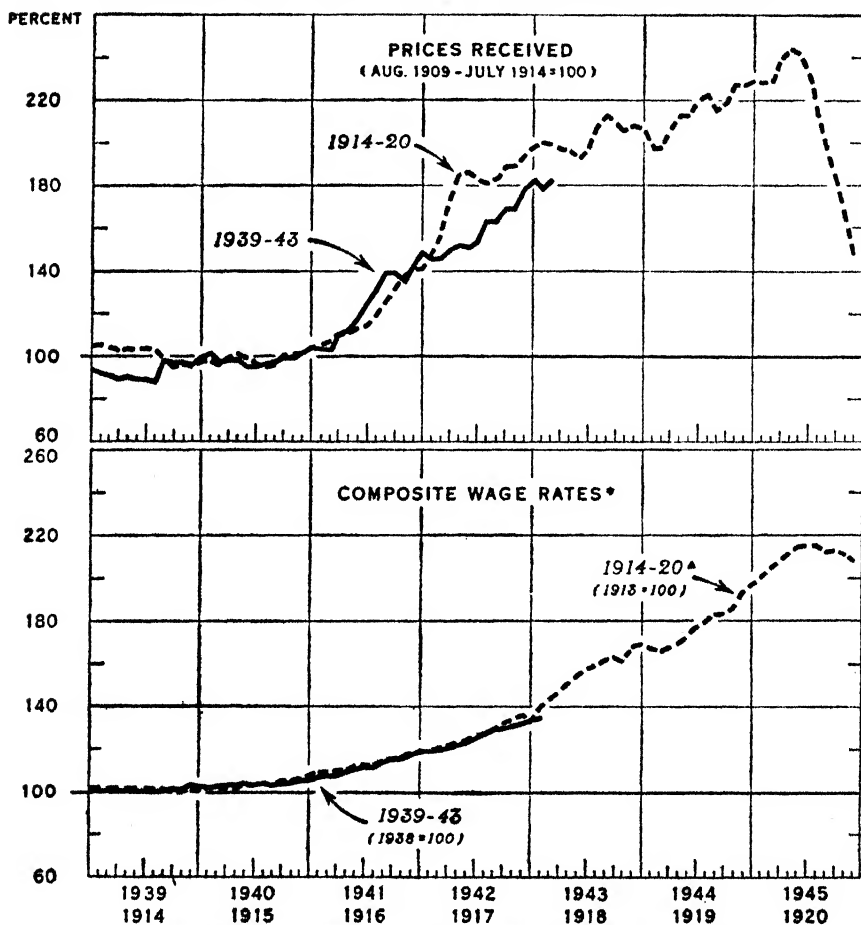
would be issued before completion of the permanent regulation.

Revised estimates for 1942 indicate there were 23,302,000 acres in cultivation July 1; 22,602,000 acres were harvested; production was 12,824,000 bales of 500 pounds gross weight; and

lint yield was 272.5 pounds per acre, exceeding the previous record yield of 269.9 pounds in 1937. Production of cottonseed in 1942 is now estimated at 5,720,000 tons.

FRANKLIN THACKREY,
Bureau of Agricultural Economics.

PRICES RECEIVED BY FARMERS AND COMPOSITE WAGE RATES. INDEX NUMBERS, UNITED STATES, 1914-20, AND 1939-43



*BASED ON DATA FROM FEDERAL RESERVE BANK OF NEW YORK. HOURLY EARNINGS OF INDUSTRIAL LABOR, WAGES OF FARM LABOR AND BUILDING TRADES, AND SALARIES OF TEACHERS AND CLERICAL EMPLOYEES
*ADJUSTED FOR SEASONAL VARIATION

ACTION ON FEED GRAIN FRONT

Need for increased planting of feed grain crops and for conservation of the Nation's feed supplies was stressed in an announcement April 22 by Chester C. Davis, Food Administrator, on the basis of an analysis of the livestock and feed situation prepared by the Bureau of Agricultural Economics. This analysis disclosed that feed grain supplies for 1943-44 will be smaller than those in the current season, unless extremely favorable yields are realized this summer and fall, while an even greater number of livestock will be on hand than the record number now being fed.

"It seems to me that we need to begin now to plan for increased wheat plantings next fall, and for some further shifts from oats to corn, wheat and barley next year," Food Administrator Davis said. "In the spring wheat areas and in areas where oats are already seeded with a poor stand, something can be done along these lines this year. However, any changes in plans this year should not be at expense of the oilseed crops for which need is even greater than for the feed crops.

"It also seems to me to be equally desirable to begin now a vigorous program of feed conservation—a program to make the most efficient use of every bushel of grain, every pound of hay, and every acre of pasture. In recent years with feed supplies large, many farmers have used more feed than necessary. With the need so great for increased livestock production, all feed should be saved and fed in the most economical manner possible."

Mr. Davis also announced that importation of wheat is already being arranged to supplement feed supplies in the Northeastern part of the country. Further importations, he said, may be arranged to help take care of feeding requirements in the Southeastern and Southwestern coastal areas. In addition to relieving the

pressure on domestic grain supplies, the importations will help to relieve the strain on the domestic transportation system. In time, he said, it will be necessary to bring the feed and livestock situation into balance, which may require additional steps not now foreseen. He emphasized, however, that there will be no shortage of grain this season, that no further changes in the ceiling prices of corn will be made this season, and that farmers who hold surplus supplies of corn can help to relieve the supply situation in the feeding areas by moving supplies to market in the normal manner.

LIVESTOCK production is at an all-time high, both in number of animals and in output of products. In total, the number of grain-consuming animal units in calendar year 1943 is estimated at about 10 to 12 percent larger than in 1942.

On January 1, about 26,946,000 milk cows and heifers two years old and older were being kept for milk, compared with 26,398,000 head on the preceding January 1, and the previous (January 1, 1934), record of 26,931,000. Total number of all cattle on January 1 was 78,170,000 head, 3 million more than on January 1, 1942, and about 3½ million above the 1934 record. Sheep and lambs numbered 55,089,000 head, slightly less than the year before, but larger than 1932's earlier record. Chickens totaled 540,107,000, or about 14 percent more than on January 1, 1938, the previous record. There were 73,660,000 hogs on hand, or more than 13 million more than on January 1 last year. According to present indications, the 1943 pig crop will number 125 million head, compared with last year's record of 105,000,000. At the same time, hog weights are running about 10 percent above normal, while egg production per hen is about 12 percent and milk production per cow is about 8 percent above the

1932-41 average. The conclusion, then, is that the Nation's feed grain requirements in 1943-44 will be much above those of any year to date.

On the feed production side, supplies available in the fall of 1943 seem likely to be smaller than in 1942. If farmers carry out their March 1 intentions and obtain average yields, production of feed grains in 1943 will be about 10 percent less than in 1942. And even if yields this year were to be as high as the very favorable ones of last year, feed grain production in 1943 probably would be but little larger than in 1942. Also, the total supply of oil meal and cake, and other protein supplements and by-product feeds, during the feeding year ahead probably will be little larger than in the present feeding year.

CARRYOVER of corn and other feed grains from 1942 crops into the feeding year that starts this fall probably will be about the same as that carried into the current feeding year. Stocks of old-crop corn on next October 1, beginning the 1943-44 season, may well be smaller than on last October 1, while stocks of old-crop oats and barley this summer will apparently be somewhat greater than last summer. That is, the equivalent of the very large corn crop harvested last fall, and oats, barley and grain sorghums harvested last summer, as well as 275 to 300 million bushels of wheat, will be used up by the end of this feeding year.

Although total supplies of oil meal and cake, as well as other protein supplements and by-product feeds, were generally at a record level in 1942-43, the demand for these has been in excess of supply. The current prospect is that the over-all supply of protein feeds and supplements during 1943-44 will not be greatly different from that available in 1942-43. Plainly, these feeds must be used as efficiently as possible and every effort must be made to distribute feed equitably.

The Food Administrator's call for

increased planting of grain crops, and for vigorous feed conservation, coupled with announcement of the projected importations of wheat, were based upon a recognition of the feed supply situation which may face livestock producers in 1943-44 and 1944-45, if this year's yields turn out to be no better than average.

Of course, favorable yields this year would help out, but the feed situation throughout the 1943-44 feeding year will be very tight, in case of any extended or continuing drought in the coming growing season. Especially would this be true if drought were to hit the 1943 corn crop in the Midwest. Looking further ahead, it appears that livestock production, particularly the production of hogs and poultry, would have to be leveled off in the coming year if there were no increase in feed production from the levels in prospect during the early spring, unless substantial additional supplies are drawn from such sources as Canada and Australia, or farmers find it possible to use more efficiently all available supplies of feed.

WITH the number of both cattle and sheep at a relatively high level, ranges and pastures generally are adequately stocked. This situation, together with our current need for as much meat as possible, indicates that individual ranchmen should be careful not to increase their livestock numbers beyond the range and feed resources that will be available if weather is about average during this year and next.

Although somewhat smaller than in World War I, the number of cattle in the 11 Western States on January 1 was 12 percent over the average for the period 1932-41 and 4 percent more than on hand January 1, 1934. The number of stock sheep in these same States, however, was 8 percent below the average of 1932-41, and 15 percent below the number on January 1, 1934. Cattle numbers in Oklahoma and Texas were 9 percent larger on

January 1 than the average number on hand during 1932-41 and only 5 percent under the number on hand January 1, 1934. Stock sheep were 31 percent more numerous than on January 1, 1934. Cattle numbers in 7 Great Plains States—Montana, Wyoming, Colorado, Kansas, Nebraska, North Dakota, and South Dakota—were 17 percent above the average for 1932-41, and were only

6 percent under the high number on hand January 1, 1934. Ranges generally have been good during the last few years, especially in the Great Plains region. Although current prospects are relatively favorable, grass has been slow in starting this season and there are still some dry areas in the Southwest.

MALCOLM CLOUGH,
Bureau of Agricultural Economics.

FARM EMPLOYMENT IN 1943

MAINTENANCE of farm employment levels and increased production per worker, despite large out-movement number of farm workers and use of many less efficient workers, have been the most outstanding features of the wartime farm labor situation. These seemingly contradictory trends are explainable in terms of replacements of losses primarily of younger men by women, youths, and older men, and the fuller employment and more efficient utilization of available workers.

During the past three years, it is estimated that civilian migration and entries into the armed forces removed 2.5 million actual or potential farm workers from the farm population. In addition there was a net increase in the number of farm residents employed in nonagricultural occupations of approximately 1.7 million persons. The total on-farm labor supply of actual or potential farm workers thus sustained a loss of 4.2 million persons between April 1940 and April 1943.

The fact that total farm employment during 1942 and the first quarter of 1943 remained at approximately the 1940-41 levels shows that the loss of workers from farms during the past few years has been substantially replaced, at least in numbers. Replacements have consisted very largely of farm family members who previously were not doing farm work or who were doing an amount so small as not to be reflected in estimates of farm employment made by the Bureau of Agricul-

tural Economics. Total farm employment in the United States averaged 10,397,000 persons during 1942, as compared with 10,361,000 in 1941, with numbers of both family and hired workers being maintained at their 1941 levels.

For the first quarter of this year, farm employment has remained at a level not appreciably different from that of corresponding months of 1942. On April 1 total farm employment of 9,308,000 persons was approximately 2 percent under the April 1, 1942 estimate of 9,483,000. Unfavorable weather during March delayed spring work in most sections of the country and may have been the major factor accounting for the somewhat less than usual increase in farm employment from March 1 to April 1. The number of hired farm workers has been smaller during each of the first 3 months of this year than in the corresponding months of last year. Although the monthly totals averaged 6 percent under the 1942 level, they averaged only 3 percent under the 1941 level. On April 1, 1943, there were 1,875,000 hired workers on farms, compared with 2,010,000 on April 1, 1942, and 1,991,000 on April 1, 1941. Ever since September 1942, the number of hired farm workers has been falling slightly below the corresponding monthly levels of a year earlier. The decline has been offset partially by expansion in the number of family workers, principally women and children.

IN each major geographic division of the country, employment of family workers during the first quarter of this year was maintained at substantially the same level as that of a year earlier. In all divisions except the Pacific States, however, there was some reduction in the number of hired farm workers. The number of hired farm workers in the Pacific States remained unchanged. On April 1, total farm employment was under that of April 1, 1942, in all geographic divisions, except the Pacific States. These decreases ranged from less than 1 percent in the West South Central States to approximately 3 or 4 percent in most of the other divisions.

The rapid changes and abnormal conditions of wartime invite comparison of present conditions with those of some pre-war period. The 5 years 1935-39 are frequently used as a pre-war standard for measuring agricultural production. This period, however, is less satisfactory in appraising farm employment changes since its average employment of 10,920,000 persons was undoubtedly affected by the high level of unemployment then prevailing in the Nation. Available estimates indicate that during 1935-39 there were on the average 8 to 10 million unemployed workers, whereas there are now only 1 million.

During 1935-39, outward migration of persons who were underemployed on farms was retarded substantially by lack of employment opportunities in towns and cities. Because the number of underemployed farm workers was quite large, this period does not provide a good yardstick for comparing effective employment then with that of the present when more adequate utilization is being made of available workers. Comparison of current farm employment with that of a more distant period than 1935-39 might also lead to fallacious conclusions, because of the downward trend in agricultural employment since 1909. This downward trend is associated, of course, with changes in production conditions

following the mechanization of agricultural operations, transfer of certain operations from farm to nonfarm establishments, changes in export trade conditions, and with other factors influencing labor needs on farms.

DURING 1942 an agricultural production volume 27 percent larger than the 1935-39 average was achieved by a working force 5 percent smaller than in 1935-39. Average output per worker in 1942 was 34 percent above that in the 1935-39 period. A part of this greater production per worker was due to the better than average yields caused by unusually favorable weather conditions. Part of the increase in productivity, however, was due to improvement in the effectiveness of the average worker. The improved efficiency of labor resulted from an increase in number of days worked per worker, wide use of mechanical equipment, and improved management practices. Crop production per worker in 1942 was larger than in any previous year. Also, output of livestock and livestock products per worker, which is less affected by weather conditions, was 36 percent above the 1935-39 average. It is estimated that the average worker in 1942 handled an acreage and livestock enterprise 7 percent larger than handled in 1935-39.

Thus there were two opposing forces at work in agriculture last year with respect to the over-all effectiveness of the working force. On the one hand, considerable alteration was occurring in composition of the working force, through substitution of women, children, part-time workers, new and inexperienced workers, and older persons for the younger able-bodied, experienced male farm workers whose places they took. On the other hand, farm operators and experienced workers who remained on the farms found it necessary to work harder, more efficiently, more days and hours a week, and more weeks per year than before, which more than offset the effects of the

altered composition of the working force. Evidence of the harder efforts put forth by farmers in 1942 is shown in data as to number of hours worked per week by agricultural workers. In July 1942, for example, farmers worked 17 percent more hours per week than in July 1941. During the 5 busiest months of the year, June through October, the average work-week of agricultural workers was 9 percent longer than in 1941.¹

THAT farm employment thus far in 1943 is only slightly under the 1942 level, whereas the reduction in farm labor supply occasioned by military and civilian migration during the last 12 months has set a new record, suggests that replacements are still being made from the farm family members who hitherto have not been in the labor force. Although there are scattered reports of a so-called "back-to-the-farm" movement resulting from draft deferment of farm workers and the possible change in draft status of persons over 38 years old who are not in essential occupations, information as to the extent of the shifts from nonfarm to farm occupations is not yet at hand. The changes in farm employment from March 1 to April 1 suggest that "back-to-the-farm" movement of former farm workers has not yet been sufficient to affect current farm employment levels significantly.

Important new factors are in operation this year, however, which will considerably reduce the volume of migration from farms. Deferment of essential agricultural workers from military service will reduce the number of workers to be drafted for the armed forces. The decelerated rate of expansion of employment in essential industries, the contraction of employment in less essential nonfarm occupations, and the restrictions placed on shifts of farm workers to nonfarm jobs are reducing the volume of migration from farms to towns and

cities this year. Furthermore, the number of farm persons in the age groups in which migration is most common already has been materially reduced by the heavy outmigration of the past two years. The expected smaller net migration from farms during 1943 may reflect both a reduction of migration from farms and maintenance of a relatively high level of migration to farms. There is likelihood, however, of further migration from farms of women and girls of working age, men and boys outside of military age, and farm residents already employed in nonfarm work. In view of this fact no reversal in the direction of net migration can be expected during 1943.²

Net migration from farms is, of course, the net balance of a two-way movement. For example, more than 800,000 persons moved onto farms from nonfarm areas during 1942, but 2,400,000 persons left farms, resulting in a net balance of outmigration from farms of approximately 1.6 million. Migration to and from farms, moreover, manifests a seasonal pattern partly related to the seasonal changes in farm employment. Thus most of a year's moves into farm areas will be concentrated in the first two quarters of the year when farm employment is increasing seasonally.

ALTHOUGH present prospects are that crop acreages and livestock numbers will be greater this year than last year, the volume of production may increase only slightly, assuming average yields in contrast with the exceptionally high yields of last year. Total manhours of labor required during 1943 may thus increase by a somewhat greater percentage than the expected increase in production. The additional man-hours of labor needed could be provided by further improvements in the utilization and distribution of workers and machines, so that

¹ Bureau of the Census, Current Surveys Division, *The Labor Force Bulletin*, March 1, 1943.

² Such a reversal has occurred only in the one year 1932 out of the 23 years during which migration estimates have been made annually.

an employment level approximating that of last year might be sufficient for the production task.

Although the farm working force may include a larger number of women and inexperienced workers in 1943 than in 1942, the effect of the reduction in skilled force may be offset by improved distribution of labor and farm machinery and by reduction of underemployment of operators and family labor on farming units with operations which have been too small to provide full-time employment. If shifts from nonfarm to farm work by experienced male farm workers assume significant proportions, the effective

work capacity of the 1943 farm working force will be improved.

These shifts to farm work, however, would not necessarily involve a commensurate increase in the number of farm workers. Entry of new farmers into agriculture, or return of experienced farmers might involve only a change in operators of particular farms, without bringing any increase in the number of farms or of farm workers. In other cases, return of experienced farm workers might result in the release of other family members, particularly children and housewives, from farm work.

LOUIS J. DUCOFF,
Bureau of Agricultural Economics.

LABORATORIES AT WAR

UNTIL results have been achieved and tested, scientists do not like to talk about their work for publication. The main reason is understandable—there may not be any result worth talking about, or it may be quite different from what is anticipated; so why make promises until you know what you can deliver?

The following examples of the work carried on by the scientific agencies in the Agricultural Research Administration, therefore, are all taken from projects that have recently given results worth talking about. They will convey a better idea of the range of the research work than could be given by a lengthy discussion. Even so, they are merely representative, and selected more or less at random.

Remedy for Internal Parasites. It was discovered that phenothiazine, a synthetic organic chemical, is the most useful remedy for treating domestic animals for the removal of internal parasites. In a 1-ounce dose, it rids sheep and goats of stomach worms, nodular worms, hookworms, and related pests known to produce unthriftiness, emaciation, marked weakness, and death. In larger doses it is equally effective in removing similar parasites from calves and young cattle.

Phenothiazine in 1½-ounce doses is practically a specific for the removal from horses and mules of blood worms and related parasites that are responsible for intermittent colic, marked disturbances in circulation, and impairment of working efficiency. In very small doses this drug is also effective in removing cecal worms from poultry—parasites that transmit blackhead to chickens and turkeys. It was reported that one of the three companies now manufacturing phenothiazine, sold in 1942 one and one-half million pounds of it for use as a livestock remedy.

WILT-Resistant Tomato: Pan America, a new tomato variety far more resistant to fungus wilt disease than any variety hitherto available, was developed. This variety comes from a cross between Marglobe and a wilt-resistant wild tomato from Peru. Much of the tomato crop land of the United States is so infested with the wilt fungus as to prevent profitable tomato production. Introduction of the Pan America offers a practical and economical solution of this problem.

Better Poultry Rations: Through poultry nutrition research, data were developed as to satisfactory substi-

tutes for the usual poultry feeds. These facts have made possible widespread readjustments in the poultry feed situation without lowering production of meat and eggs. Without such information it would not be possible to attain the war goal set for poultry and egg production.

More Eggs per Hen: Through administration of the National Poultry Improvement Plan in cooperation with 44 States, a material reduction in poultry mortality from pullorum disease was effected. This plan assisted in raising average annual egg production per bird in the United States from 89 in 1934 to 113 in 1942.

Better Cheddar Cheese: A method of making Cheddar cheese of the best quality, consistently and regularly, by using milk of good quality and pasteurizing it to make control of the acid development easy, was worked out. This method, demonstrated in nine important dairy States, has proved invaluable to manufacturers in producing U. S. No. 1 Cheddar cheese for shipment overseas. In one State alone, demonstrations by one field man resulted in an increase of more than 2 million pounds of No. 1 cheese, worth from 1 to 4 cents a pound more than No. 2 cheese.

DRIED Whole Milk: Producers of dried whole milk for overseas shipment were assisted in clarifying factors involved in the production, packaging, handling, and storing of the product, to make the milk keep for long periods in an edible state. The shift to dried whole milk in many areas has resulted in greater returns to the dairy farmer than he would otherwise have obtained from the sale of butterfat alone.

Artificial Insemination: Artificial-breeding associations have been actively sponsored and developed. More than 200,000 cows are now enrolled in these associations. By means of artificial insemination each bull contributes his superior breeding qualities to 15 to 20 times as many cows as he could otherwise serve. One bull in

New York State by this means bred 500 cows last year.

Protecting Stored Grain: Improved methods of protecting millions of bushels of grain in storage from the depredations of insects have been devised, in the face of limited supplies of fumigation materials. Investigations showed that by the addition of 10 percent methyl bromide to the standard ethylene dichloride-carbon tetrachloride mixture the dosage could be cut from 6 gallons per 1,000 bushels of grain to 2 gallons.

Hemp Machinery: Harvesting and processing machinery has been developed to make available a domestic source of hemp. Based upon this work, a hemp program for the planting in 1943 of upwards of 185,000 acres and the building of necessary plants for the production of hemp fiber from this domestic crop is under way.

RANGE Improvement: Methods were devised for increasing the carrying capacity of native pastures and ranges in the southern Great Plains, by the control of sagebrush. Experiments show that control by mowing is feasible, and at what season of the year and how frequently it should be done. Mowing in two successive Junes eradicated nearly all of the sagebrush plants, left the few survivors with only a trace of vigor, and more than doubled the stand of grass. Grazing experiments are demonstrating that beef production is materially higher on the mowed pastures.

Better Oats: Five varieties of oats—Marion, Hancock, Boone, Tama, and Vicland—were developed in cooperation with the Iowa and Wisconsin Agricultural Experiment Stations. These varieties are highly productive and resistant to both stem and crown rusts and also to loose and covered smuts. Their record was outstanding in comparison with other standard rust-susceptible varieties in 1942. As a result, farmers plan to use them almost exclusively. It is estimated that they will occupy 95 per-

cent of the Iowa oat acreage in 1943, and only slightly less in surrounding States.

Designs for Women's Work Clothes: In women's work clothes, 24 new designs needed to insure efficiency, comfort, and health on war jobs, both on the farm and in industry, have been originated. Research on these designs, begun 18 months before Pearl Harbor, made possible their release to pattern companies and ready-to-wear manufacturers early in the war. Within a few months, 100 companies were putting on the retail market garments following or adapting these designs.

Screw Worm Remedy: A new remedy for screw worm—smear No. 62—has been developed, which is reducing the annual loss of meat, wool, and mohair occasioned by the attacks of screw worms on livestock.

SWINE Erysipelas: The use of live culture vaccine and anti-serum for the control of the swine erysipelas was worked out. Results have been so favorable that in 1942 cultures were released to licensed biological houses for use in a vaccination program under Department and State supervision in the five States, Nebraska, Iowa, South Dakota, Missouri, and Illinois. More than 2,000,000 hogs have been vaccinated and the results in general have been very encouraging.

Better Antigen for Pullorum: A new antigen, known as T. G. Antigen, for the detection and elimination of pullorum infected chickens or "carriers" of this widespread and often fatal disease was developed. This antigen practically eliminates the non-specific reactions and is as dependable as the antigen formerly used in detecting infected birds. Its use, therefore, conserves poultry without increasing risk of infection. During the past year sufficient T. G. antigen was produced to test 30,000,000 birds and sufficient of the older type to test 20,000,000 birds. The large-scale testing carried out with these products has been the most important factor in protecting

the poultryman against loss by pullorum disease.

Vitamin A from Vegetables: Studies made with human subjects demonstrated that normal dark adaptation of the eyes can be maintained by means of the vitamin A value provided in foods of plant origin, such as carrots, spinach, peas, and dried alfalfa, as effectively as by means of the vitamin A furnished by foods of animal origin, such as egg yolk, liver and liver oils.

Phosphorus for Range Cows: It was found that the feeding of phosphorus supplements to range cows in phosphorus-deficient areas of the Gulf Coast States adds as much as 30 percent to the calf crop and 100 pounds to the weight of the calf as a yearling. This method is being used widely in mineral-deficient areas to increase beef production.

Better Honey Bees: By selection and breeding, high-producing strains of bees were developed that have produced 50 percent more honey than common stock.

Vegetable Dehydration: The basic design of dehydrating equipment was improved and new processing and packaging techniques were making possible the production of dehydrated vegetables and fruits of improved nutritive value and color retention, palatability, and ease of rehydration. These improved dehydrated products make essential foods available to our armed forces and to lend-lease while effecting a saving in shipping space amounting to sixty to eighty percent.

MEAT Dehydration: Methods for the successful dehydration of meats for lend-lease and military use were developed. As a result of this work, dehydrated meat is now being produced in large quantities.

Rubber Substitute from Vegetables: Norepol was developed, a rubber substitute which satisfactorily replaces natural rubber in many essential mechanical uses. This product, made from soybean or corn oil, is in commercial production under various trade names.

Body Louse Control: Fumigation schedules and necessary bags and vaults were developed, whereby soldiers' clothing and equipment can be rapidly and effectively freed from body lice.

New Method of Dispersing Insecticides: A new method of dispersing insecticides as aerosols was discovered and a material found that increases the deadliness of pyrethrum, making one pound of material take the place of two gallons of fly spray. This development is conserving pyrethrum for agricultural uses, and proving advantageous in protecting armed forces from malarial mosquitoes. Also, it is safeguarding this country against introduction of dangerous insects.

Belladonna Supplies: A cooperative program was carried out for production

of belladonna in 1942, which has provided an adequate supply of this essential drug for all purposes. The quality of the domestic crop produced in accordance with methods developed by research was much superior to that of the imported product, averaging twice the alkaloid content of U. S. P. standards.

Citrus Base Marmalade: A chemical process for preserving citrus fruit concentrate (oranges and grapefruit) in barrels was discovered. Millions of pounds have been processed by this method for shipment under lend-lease. This development served to release metal containers for other foods.

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FARM MACHINES AND FARM POWER

WITH 1943 production of all kinds of farm machines restricted greatly, the farm labor force the smallest in years, and production goals the highest on record, farmers are placing increased reliance upon their machines, especially the important labor-savers. The farm power situation in World War II is greatly different from that in World War I, when tractors were few and the automobile and motor truck industries were in their infancy. During World War I, production of all kinds of power machines increased and the numbers on farms increased in each of the war years. Even so, tractors in 1920, furnished only about 5 percent of the drawbar power used for operating farm machines (table 1).

At the beginning of World War II, numbers of tractors were at peak levels, whereas numbers of work animals were only about 55 percent of the 1920 numbers. Also, as the average age of horses and mules now on farms is much higher than in 1920, it is altogether likely that the amount of work accomplished per work animal is now somewhat less than in the

period of World War I. Because tractor production in 1943 has been reduced greatly from normal, tractor numbers at the beginning of next year probably will show little change from present numbers. Numbers of work animals are certain to show a further decrease, a tendency expected to continue for some years in view of the small colt crops of 1942 and 1941.

Indications are that Nation's total area in crops in 1944 may well be the highest in about a decade. If this proves to be the case, total drawbar power on farms next year may well be less than in any recent year.

In World War I, when they were faced with a wartime labor shortage, farmers increased their drawbar power and expanded their production. Drawbar power on farms increased about 20 percent from 1910 to 1920, while the area in harvested crops increased only about 10 percent. Thus there was about 10 percent more drawbar power per acre of harvested crop land in 1920 than in 1910.

AS part of the pattern of change in farm power, numbers of tractor-

drawn and mounted machines are at peak levels. Also, most of the tractor machines now on farms are relatively new, as they either represent recent developments or were brought into extensive use only with the widespread adoption of rubber tires by tractors and other farm machines. Most numerous of the tractor machines are moldboard plows, row-crop cultivators, grain drills and grain binders (table 2). However, there are large numbers of important labor-saving machines, such as combines and corn pickers. Use of combines has spread to all parts of the country, largely as result of the use of rubber tires and the introduction of small combines. Use of corn pickers is still limited largely to the Corn Belt, the Lake States and the Great Plains, where large acreages of corn are grown and harvested from the standing stalk. Most tractor machines are relatively new and their average age is much less than that of similar horse-drawn machines. The average age of machines first used by tractor power, of course, is much higher than the average age of tractor machines recently adopted. Thus, tractor plows and disk harrows, grain binders and grain drills, are older on an average than are machines such as corn pickers, combines, tractor mowers, tractor row-crop planters, and tractor cultivators.

To strike a balance as regards the farm machinery situation, it is im-

portant to consider the horse-drawn machines. At present, about 1,900,000 tractors are owned by some 1,700,000 farmers. Probably some 1,000,000 farmers, mostly croppers or other farmers with small acreages, have little or no farm power or machinery. The cropper farmers use machinery and power from the operational unit of which their farms are parts, whereas small farmers depend upon hiring the additional machines and power they need. There are still about 3,000,000 farmers who depend largely upon animal power and animal-drawn machines for operating their farms. In addition, the use of many horse-drawn machines still continues on tractor farms. Especially is this true in the use of light-duty machines such as planters, hay rakes, grain drills, cultivators, and mowers, and for some heavy-duty machines, such as grain binders and manure spreaders.

Many kinds of horse-drawn machines are now so old that they would be discarded if new machines and adaptable power units for their operation were available. This applies especially to grain and row-crop binders, dump rakes and mowers. Many horse-drawn machines already have served three-fourths or more of their useful lives, by normal expectations. For some machines, important numbers more than 20 years of age are still in use.

TABLE 1.—Farm Power for Drawbar Work, United States, Specified Years

Year	Acres of cropland harvested	Tractors on farms Jan. 1	Horses and mules 2 years old and over on farms Jan. 1	Equivalent work animal units per 100 acres harvested cropland ¹
	<i>Millions</i>	<i>Thousands</i>	<i>Thousands</i>	<i>Number</i>
1910.....	329	0.1	19,429	5.9
1915.....	343	25	21,866	6.4
1920.....	360	246	22,386	6.6
1925.....	360	549	21,038	6.6
1930.....	370	820	17,981	6.1
1935.....	345	1,048	15,743	6.0
1940.....	344	1,545	13,005	6.0
1942.....	351	1,836	12,411	6.1
1943 ²	355	1,900	12,270	6.1

¹ One tractor was considered as the equivalent of 5 work animals.

² Preliminary. Harvested acres based on anticipated 1943 plantings and normal abandonment.

There are important regional aspects as regards farm machinery. For many machines there are definite areas of concentration. Age of machine varies widely in different areas of the country. For tractor machines, age is above average in the areas where tractor power first came into extensive use. Thus, tractor machines are relatively old in the Great Plains. In the same areas, horse-drawn machines are above average age, as the decline in use of animal power in recent years has resulted in a decrease in purchases of many kinds of horse-drawn machines.

ANOTHER important factor affecting age of machinery in different parts of the country is the relative economic status of farmers. In areas where drought damage has been widespread or where prices of farm products have been relatively low, the farm-machinery situation is relatively unfavorable. In these

areas, the age of machines is usually above average, and purchases of new tractors and tractor equipment in recent years have been small. The replacement of farm machines in such areas in the years ahead should be relatively greater than in areas where farmers' buying power has been above average and where machines now on farms are of below-average age and relatively numerous in relation to the work to be done.

Machines of certain types tend to be extensively used in rather definite areas. The great bulk of one-way disk plows and riding listers are found in the Central Plains States and in Oklahoma and Texas. The one-way disk plows are used extensively for preparing land for the seeding of small grain, especially wheat, in the sub-humid winter wheat areas. Listers are used for the same purpose, but probably are used more extensively for preparing land for row crops,

TABLE 2.—Estimated Number and Age of Specified Farm Machines, United States

Kind of machines	Number of machines on farms		Average age of machine, Jan. 1, 1942	Number of machines on farm Jan. 1, 1942, of specified age group			
	Jan. 1, 1943	Jan. 1, 1942		10 years and less	11 to 20 years	21 to 30 years	31 years and over
	Thousands	Thousands	Years	Percent	Percent	Percent	Percent
Riding moldboard plows—tractor	1,520	1,461.2	7	74	23	3	—
Riding moldboard plows—horse	1,001	1,041.0	17	25	45	24	6
Disk harrows—tractor	1,228	1,181.4	8	71	24	4	1
Disk harrows—horse drawn	1,294	1,332.8	16	32	42	21	5
Riding listers and busters—tractor	297	288.3	7	73	25	2	—
Riding listers and busters—horse	218	232.6	15	31	44	21	4
Row crop planters—tractor	210	204.8	6	85	12	2	1
Row crop planters—horse or larger	1,684	1,705.5	15	35	38	22	5
Riding row crop cultivator—tractor	987	887.9	5	90	9	1	—
Riding row crop cultivator—horse	2,298	2,357.0	16	32	43	22	3
Mowers—tractor	345	313.6	5	89	8	2	1
Mowers—horse	2,504	2,565.0	15	40	35	19	6
Sulky or dump rakes	2,148	2,165.5	17	30	40	22	8
Side delivery rakes	720	713.8	11	51	34	13	2
Grain drills—tractor	422	422.3	9	68	26	5	1
Grain drills—horse	1,264	1,289.8	18	25	40	27	8
Grain binders—tractor	356	366.1	9	64	26	8	2
Grain binders—horse	986	1,018.6	19	21	40	29	10
Row crop binders—tractor	83	82.0	8	72	18	8	2
Row crop binders—horse	511	527.7	17	30	42	22	6
Combines—all sizes	298	264.3	5	80	19	1	—
Corn pickers	140	129.9	6	82	17	1	—
Grain threshers	160	167.8	16	29	45	21	5
Manure spreaders	1,158	1,158.1	12	50	35	14	1
Milking machines	310	253.1	8	67	26	7	—
Cream separators	1,748	1,748.0	10	56	33	10	1

The above material was adapted from B. A. E. report F. M. 41, Age and Size of Principal Farm Machines. Data for other machines as well as detailed information showing numbers, sizes, ages of the various machines by State groups are included in the above report which is based largely on information obtained from more than 27,000 crop correspondents in February 1942.

especially cotton, grain sorghums and corn.

The great bulk of all kinds of one-horse equipment is found in the South Atlantic and South Central States, but the numbers of some kinds of such equipment, especially planters and cultivators, are still important in other regions. Most of the manure spreaders are in the Northern, Northeastern, and Pacific Coast States, where dairy production is of key importance. Milking machines are especially important in the North Atlantic and Lake States, and numbers of cream separators are concentrated in the Corn Belt, the Lake States and the Great Plains. On the other hand, mowers, hay rakes, row crop planters, disk harrows, and some other machines are rather widely distributed over the Nation. The types and kinds of machines used in different areas are determined largely by the size of the power unit and the amount of work to be performed.

Wide adoption of motor transportation, tractors, and complementary labor-saving machines has brought many changes in the general farm picture. With the power and machines now on farms, production per farm worker of products for sale and for use in the farm home is now more than 50 percent greater than in 1910 and more than one-third higher than in 1920. These increases, however, do not take into account the fact that, in the earlier period, more of the worker's time was devoted to producing feed for workstock than now. Even taking this into account, the increase in production per farm worker has been notable.

IN 1920, the feed and forage from more than 90 million acres of the country's cropland, or around 25 percent of the total, was needed for feeding of horses and mules on farms and in cities. Now, with numbers of horses and mules much smaller, only about half that amount of cropland is needed for feeding work animals.

Adoption of machine power contributed greatly to the agricultural surplus of the past 20 years, but the once "surplus acres"—free for alternative crops—are now vitally needed for producing food for war.

In some respects of, course, the increased farm mechanization since 1920 has created special problems related to the prosecution of World War II. For example, the use of tractors and relatively complicated farm machines has expanded the need for skills in agriculture which also are needed in industry. Furthermore, manufacture of farm machines requires metals and other materials that are basic war materials.

More steel and other scarce metals are used in tractors and tractor machines than were required for horse-drawn machines. Probably around 60,000 tons of crude rubber or its equivalent in reclaimed rubber is needed for maintaining the rubber tires and other rubber equipment on farm automobiles, trucks, tractors, and other machines. Motor fuel consumption on farms is now more than 200 percent greater than in 1920 and more than 30 times above the 1910 figure.

Thus, with the increased machine power on farms we have relatively less need for farm labor and farm materials in operating the farms than formerly, but there is much greater need of purchased materials and skilled non-farm labor for producing the machines, for servicing them and for supplying other materials needed in their operation.

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An amendment to the price ceiling regulation affecting butter encourages many wholesalers to resume sales to jobbers and chain store buyers instead of selling almost entirely to individual retail stores, bakers, hotels, and other final consumers. The amendment divides the wholesalers' margin into two allowances—one for primary distributors and another for jobbers.

WARTIME CHANGES IN COW NUMBERS

IN view of the recent public concern over reported widespread sales of dairy herds in areas near war industries, an analysis made of shifts in size and number of dairy herds in 11 Connecticut towns presents timely and reassuring data. In brief, the analysis shows that, although some herds have been sold in these areas of Connecticut, there has been no alarming dispersal of herds, largely because the productive cows sold by farmers were sold to other farmers who kept the cows in production.

The towns chosen were selected to represent major type-of-farming areas, land classes, and milk markets in the State. All owners reporting one or more cows were included in the analysis. The survey dealt with changes in the number of cows recorded on tax assessment lists of the 11 towns, all of which are now centers of wartime industrial work.

Milk is Connecticut's major agricultural product, most of it being sold in Hartford, New Haven, Bridgeport, and the many smaller cities of the State.

TABLE 1.—Changes in Cow Numbers by Size of Herd in 11 Connecticut Towns, 1941-42

Cows per farm, 1941	Number of herds	Change in number of cows	
		Per herd	Total
Herds of 1 or 2 cows added: 0	59	+1.2	+69
Herds of 3-25 cows added: 0	9	+13.0	+117
Herds eliminated:			
1-2	57	-1.3	-73
3-9	14	-4.6	-64
10 or more	8	-17.6	-141
Herds increased:			
1-4	68	+1.8	+120
5-19	152	+3.5	+526
20 or more	104	+5.1	+526
Herds decreased:			
1-4	58	-1.2	-70
5-19	88	-2.5	-217
20 or more	67	-5.0	-334
Herds remaining unchanged:			
1-2	275	0	0
3 or more	130	0	0
All herds	1,089	+0.4	+459

TABLE 2.—Net Changes in Cow Numbers by Size of Herd in 11 Connecticut Towns 1941-42

Cows per farm, 1941	Total cows, 1941		Net increase in cows	
	Farms reporting	Number of cows	Number	Percent
0	68	0	186	-----
1-2	415	562	-9	-1.6
3-4	79	260	-47	-18.1
5-9	104	730	28	+3.8
10-14	116	1,376	103	7.5
15-19	102	1,704	79	4.6
20-49	184	5,113	121	2.4
50 or more	21	1,618	-2	-0.1
Total	1,089	11,363	459	4.0

¹ Number of farms adding herds during year.

The high level of industrial employment has brought an increase in the demand for milk, at the same time it has heightened the competition for labor between industries and milk producers. More than half the cows in Connecticut are in herds of 20 or more, all of these requiring labor in addition to that of the operators. Only a small proportion of the cows is in herds of less than 5, but the number of herds of this size is large. Some herds are supplementary enterprises on poultry, tobacco, potato, and vegetable farms, and many herds are on part-time or rural residence farms.

Between October 1, 1941, and October 1, 1942, the two most recent assessment dates, some herds in these towns went out of existence and other herds replaced them, the net effect of the changes being small. On each of 59 farms, one or two cows kept mainly for family use were added during the 12-month period, but there was a decrease in the same category of cows on each of 57 other farms (table 1). Fourteen herds of 3 to 9 cows and 8 herds of 10 cows or more were eliminated, but at the same time 9 new herds appeared, with an average of 13 cows to the herd. Thus, there appears little ground for alarm about dispersal of cows in these areas.

OF 938 herds listed both in 1941 and in 1942, 323 were increased, 210 were decreased, and 405 remained unchanged. The excess of increases

over decreases in these herds accounted for a 4-percent increase in cow numbers for the entire group of farms (table 2). Farms with 10 to 14 cows made the largest net percentage increase of any group having cows in 1941. In percentage terms, the decrease in cows in 3 to 4 cow herds was large. For several years the importance of these very small herds has been declining as they were dispersed or increased to larger size.

Only 18 herds were reduced by as many as 10 cows during the year, and this reduction totaled only 316 cows. War causes seemed to be less important than nonwar causes in explaining these decreases. The reduction of 120 cows in 7 herds could be traced to such natural causes as death of the operator or moving to another town. In 4 herds there was a total decrease of 65 cows because of wartime conditions. The reasons for decreases in the other 7 herds are unknown.

The results of this study of tax lists agree closely with a farm labor survey which covered 20 percent of the commercial farms in Connecticut and indicated that in spite of a large reduction in the number of regular workers on farms, dairymen had been able to increase cow numbers 4 percent in the year ending in the fall of 1942.

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COTTON SUPPLIES AND PRODUCTION

LAST year was the most profitable experienced by the American cotton farmer for some time. Although cotton acreage was the second smallest since 1896, production totaled 12,824,000 bales, 500 pounds gross weight, or nearly 3 percent above the 1932-41 average. Yields were uniformly good throughout the Cotton Belt, and the United States average yield was 272.5 pounds per acre. This was a new high, exceeding the previous record

established in 1937 by 1 percent. The weighted average farm prices to April 1 were 18.93 cents per pound for lint and \$45.64 per ton for seed, giving producers returns of 1.4 billion dollars from marketings, or 1.5 billion including Government payments. Returns were 17 percent higher than in 1941 and the highest since 1925.

Like other farmers, however, cotton farmers must look ahead rather than backward. It will be useful, there-

fore, to explore the outlook for cotton during the coming year. The domestic carry-over of American cotton last August was 10,505,000 bales. As 1942 production (ginnings plus city crop) is estimated at slightly under 12½ million running bales, the total 1942-43 domestic supply of American cotton is nearly 23 million bales, or about 300,000 bales larger than last season. Continuation of the present level of mill activity would result in a consumption of about 11.3 million bales in the 1942-43 season, of which nearly 200,000 bales would be of foreign growths. Total domestic disappearance of American cotton (consumption, exports, and destroyed) probably will be nearly ½ million bales under production in 1942, leaving an end-of-season carryover of American cotton of about 10.8 million bales.

Although the indicated carry-over next August will be equivalent to nearly 11 months disappearance, it is significant that the size of the carry-over varies considerably for different quantities of cotton. In the low grades and in the shorter lengths, particularly under 15/16 inch, the disproportionately large supply is estimated to be enough to last several years at current rates of disappearance. However, in the high grades and longer staples for which wartime demand is greatest the carry-over will represent only a few month's supply. Nevertheless, even for these, the supply will be enough to last until the 1943 crop becomes available.

MOST of the 1943 crop has already been planted, but the first acreage estimate will not be made until July 8. It will be a month later than that before any official estimate will be available on the size of the crop and well into the picking season before much will be known about the grade and staple of the crop. If for analytical purposes, it is assumed that the planted acreage in 1943 proves to be the same as in 1942 and that yields and abandonment are equal to the

1937-41 average, the resulting production would be about 11¼ million running bales. This would give a supply for 1943-44 of slightly above 22 million bales. Should 1943-44 disappearance be the same as that estimated for this season, the carry-over on August 1, 1944, would be slightly under 10 million bales, or almost 10 months supply. If the yield should be less than the 1937-41 average—say equal to the lowest during that 5-year period—the carry-over on August 1 next year would be nearly 9¼ million bales. If there were the same distribution of qualities in the 1943-44 supply as in 1942-43, however, a carry-over as low as 9¼ million bales could easily result in a scarcity of the higher grades and necessitate considerable shifting by domestic mills to lower grades in the medium staples. It is likely also that shortages in the longer staples would develop under these circumstances.

Farmers were urged to shift to longer staple varieties in 1943, in areas where practical, but the wartime need is for both longer staple and higher grade cotton than much of that normally grown. Quality differentials are such as to encourage careful picking and handling. For example, Middling 1-inch cotton qualifies under the 1943 loan for a premium of 25 points, or \$1.25 per bale of 500 pounds net weight based on Middling 1½ inch. The premium for Middling 1¼ inch cotton is 120 points, or \$6.00 per bale. If through carelessness or for some other reason the grade of the 1¼ inch cotton declines to Strict Low Middling, there is a discount of 45 points, or \$2.25 per bale instead of a premium of \$6.00. On the other hand, if careful handling raises the grade to Strict Middling, the premium is 170 points, or \$8.50 per bale. Such differences are obviously substantial enough to merit careful consideration.

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Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1935-39=100) ²	Cost of living (1935-39=100) ³	1910-14=100					Prices paid, interest, and taxes	Farm wage rates
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in—			Prices paid, interest, and taxes		
					Living	Production	Living and production			
1925.....	90	126	125	151	163	147	156	170	176	
1926.....	96	131	126	146	162	146	155	168	179	
1927.....	95	127	124	139	160	144	163	166	179	
1928.....	99	126	123	141	160	148	155	168	179	
1929.....	110	134	122	139	159	147	154	167	180	
1930.....	91	110	119	126	150	141	146	160	167	
1931.....	75	84	109	107	128	123	126	140	130	
1932.....	58	58	98	95	108	109	108	122	96	
1933.....	69	61	92	96	108	108	108	118	85	
1934.....	75	76	96	109	122	123	122	128	95	
1935.....	87	86	98	117	124	127	125	130	103	
1936.....	103	100	99	118	123	125	124	128	111	
1937.....	113	117	103	120	128	136	131	134	126	
1938.....	89	91	101	115	122	125	123	127	125	
1939.....	108	105	99	113	120	122	121	125	123	
1940.....	123	119	100	115	121	124	122	126	126	
1941.....	156	169	105	127	131	131	131	134	164	
1942.....	181	238	116	144	154	149	152	152	201	
1942—April.....	173	218	115	144	152	149	151	151	177	
May.....	174	225	116	144	153	150	152	152	183	
June.....	176	234	116	144	154	150	152	152	202	
July.....	178	247	117	144	154	150	152	152	202	
August.....	183	251	118	145	155	150	153	152	220	
September.....	187	255	118	145	157	151	154	153	223	
October.....	191	259	119	146	158	151	155	154	230	
November.....	194	273	120	146	160	151	156	155	230	
December.....	197	279	120	147	162	153	158	156	230	
1943—January.....	190	291	121	149	163	155	160	158	223	
February.....	202	286	121	150	165	157	162	160	230	
March.....	203	287	122	151	167	158	163	161	230	
April.....					168	161	165	162	230	

Index of prices received by farmers (August 1909-July 1914=100)									Ratio, prices received to prices paid, interest and taxes
Year and month	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	128	144	121	140	155	144	139	84
1928.....	130	152	176	159	151	158	153	149	89
1929.....	120	144	141	149	156	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	62
1932.....	44	47	82	102	63	83	82	65	53
1933.....	62	64	74	105	60	82	75	70	59
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	144	131	122	122	91
1942.....	119	155	125	190	189	152	151	157	103
1942—April.....	120	158	118	158	190	142	131	150	99
May.....	120	159	131	152	189	143	134	152	100
June.....	116	153	148	169	191	141	137	151	99
July.....	115	155	131	200	193	144	145	164	101
August.....	115	151	126	256	200	151	166	163	107
September.....	119	156	129	191	195	156	166	163	107
October.....	117	158	134	226	200	165	173	169	110
November.....	117	160	127	238	197	171	178	169	109
December.....	124	162	151	293	196	175	183	178	114
1943—January.....	134	164	139	277	205	177	185	182	115
February.....	138	163	156	301	214	179	170	178	111
March.....	143	166	172	302	218	180	171	182	113
April.....	146	167	189	291	218	180	173	185	113

Index of prices received by farmers (August 1909-July 1914=100)

Year and month	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	Ratio, prices received to prices paid, interest and taxes
1925.....	157	177	172	153	141	153	163	186	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	128	144	121	140	155	144	139	84
1928.....	130	152	176	159	151	158	153	149	89
1929.....	120	144	141	149	156	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	62
1932.....	44	47	82	102	63	83	82	65	53
1933.....	62	64	74	105	60	82	75	70	59
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	144	131	122	122	91
1942.....	119	155	125	199	189	152	161	157	103
1942—April.....	120	168	118	158	190	142	131	150	99
May.....	120	159	131	152	189	143	134	152	100
June.....	116	153	148	169	191	141	137	151	99
July.....	115	155	131	200	193	144	145	154	101
August.....	115	151	126	256	200	151	166	163	107
September.....	119	156	129	191	195	156	166	163	107
October.....	117	158	134	226	200	165	173	169	110
November.....	117	160	127	238	197	171	178	169	109
December.....	124	162	151	293	196	175	183	178	114
1943—January.....	134	164	139	277	205	177	185	182	115
February.....	138	163	168	301	214	179	170	178	111
March.....	143	166	172	302	218	180	171	182	113
April.....	146	167	189	291	218	180	173	185	114

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised March 1943.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1925=100, divided by its 1910-14 average of 68.5.

⁵ Revised. ⁶ Preliminary.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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MANKIND now has the physical means, in terms of agricultural production capacity and distribution equipment, to make adequate diets possible for all peoples everywhere. This fact provided the starting point of discussions at the United Nations Conference on Food and Agriculture held May 18-June 4 at Hot Springs, Va. Representatives of this country and of other members of the United Nations went on from there to discuss in detail the character of world agriculture, production, distribution, the food needs of the various peoples, and the relation of agriculture to industry and trade in the post-war period. The broad need for better balance within agriculture and for better balance between agriculture and industry was agreed upon. In seeking a balanced world agriculture, it was pointed out, each nation would need to produce at home those foods and commodities it could produce economically, but encourage active exchange between nations of other commodities. Opportunity for interchange of foods and agricultural commodities between nations, it was declared, would be essential to the provision of an adequate world diet.

Commodity Reviews

Dairy Production: 8-Point Plan

An eight-point program announced on May 11 by the War Food Administration and the Dairy Industry Committee is designed to increase milk production, particularly during the normal summer slump. The program emphasizes the following needs in terms of home-grown feeds:

(1) Abundant pastures; (2) Plenty of good hay—400 to 500 pounds a month per cow; (3) Abundant silage—at least 2½ tons per cow; (4) Conditioning of cows for freshening—an 8-week rest leads to greater milk production; (5) Liberal provision of good roughage; (6) Balanced feeds rations—wise use of protein concentrates; (7) Feeding to avoid summer production slump due to inadequate feed; (8) Raising of calves with less milk, by starting them on grain and hay when 2 weeks old.

Total milk production during the first 5 months of 1943 was not as large as in the corresponding period last year, although it was the second largest on record. Unseasonably cold weather retarded pastures sufficiently so that the reduced production per cow together with a decrease in the percentage of cows milked, more than offset the larger number of cows on farms. On June 1 milk production per cow was 2 percent below a year earlier. Pasture conditions in dairy areas averaged 86 percent of normal on June 1, compared with 78 percent a month earlier and 82 percent in June of last year.

Because the consumption of fluid milk is now so large, production of most manufactured products except butter, condensed milk (case goods and bulk skimmed) and dried whole milk has been smaller than in 1942.

The War Food Administration on May 1 increased the Government "set aside" of butter from 30 to 50 percent and of Cheddar cheese from 50 to 70

percent. The new percentages apply during May, June, and July. As production declines seasonally it is expected that the percentages to be held for Government purchase will decrease sharply. Storage stocks of both butter and cheese are now increasing rapidly, under the revised "set aside" orders, as production continues to increase seasonally. Thus during the low-production period this fall and winter there will be a more adequate supply of butter and Cheddar cheese available for civilian use.

Reduction of butter retail price ceilings by 5½ cents a pound on June 10 is part of the program of the Office of Price Administration to stabilize the cost of living. To prevent these reduced prices from having adverse effect on production OPA has recommended subsidy payments to butter processors. Because maximum prices have not been readily determinable by consumers, specific dollars-and-cents retail price ceilings were established for many commodities in 130 cities on May 10. The dairy products affected are fluid milk, butter, packaged cheese, and evaporated and condensed milk.

In a recent letter to the Director of Economic Stabilization, the War Food Administrator said that adequate labor would be available during 1943 to produce and harvest crops up to the announced goals. Current Government manpower programs are assisting in the maintenance or increase of the farm labor supply, the Food Administrator indicated. Because dairying requires such relatively large amounts of skilled labor these farm manpower programs will be of particular value in maintaining dairy production.

On May 1 the War Production Board established allocation control over processed industrial casein. This was necessary largely to help meet the increased casein demand from a decreasing supply caused by the greater need of skim milk for food uses.

LIVESTOCK: New Meat Board

Establishment of a War Meat Board at Chicago to facilitate allocation and distribution of the Nation's meat supply to the armed forces, lend-lease, and civilians, was announced May 17 by the War Food Administration and the Office of Price Administration. Although quarterly and yearly requirements will be determined by the Washington allocation authorities, the Board will deal with the complicated day-by-day meat supply problems caused by the war. The nine-man board represents WFA, OPA, the Army, and the meat industry.

Meat production under Federal inspection during the first quarter of 1943 was 5 percent more than during the corresponding quarter of last year and 38 percent more than the 10-year (1932-41) average for the period. The increase over last year was accounted for entirely by pork. Number of hogs slaughtered under Federal inspection during January-March was only 4 percent more than in the same period of 1942, but average live weights have been exceptionally heavy this year.

The hog-corn price ratio narrowed in April following the corn price advances allowed by price ceilings and the downward trend in hog prices. Although the ratio is still wider than the long-time average, it is now less favorable for expanding hog production than a year ago. After WFA's announcement of a downward adjustment in live animal prices, to bring them more in line with wholesale pork and lard prices which are under ceilings, hog prices declined approximately \$1.25 from early April through mid-May.

Federally inspected hog slaughter in April set a new record for the month, nearly $4\frac{1}{2}$ million head, 6 percent more than in April 1942. Average live weight of butcher hogs at seven important Corn Belt markets in early May was 253 pounds, 16 pounds heavier than a year earlier and nearly

20 pounds heavier than the 1936-42 average weight for the month. Net out-of-storage movement of about 70 million pounds of pork during April reduced May 1 stocks to 522 million pounds, about 50 million pounds less than a year earlier and 115 million pounds below the 1931-40 May 1 average. In contrast, lard stocks, including rendered pork fat, totaled 148 million pounds on May 1, about the same as the 1931-40 May 1 average, but 20 million pounds more than on May 1, 1942.

Federally inspected cattle slaughter totaled 796 thousand head in April, 14 percent less than in March, and 17 percent less than in April 1942. This decline apparently reflects some diversion of live cattle away from federally inspected plants following temporary increases in quotas of local slaughterers. Slaughter in the first 4 months of 1943 was 9 percent less than in the same period of 1942, but yet the second largest on record and 19 percent more than the 1932-41 average for January-April.

Average live weights of cattle have been heavier than usual this spring despite the tendency to market cattle earlier than planned. Average live weight of all cattle slaughtered during March was 980 pounds, 10 pounds heavier than a year earlier and 40 pounds heavier than the March average for the preceding 10 years. Calf prospects are reported to be good except in limited areas.

Weather and feed conditions were mostly favorable during April for the development of the early lamb crop. As result, early lambs made good gains in previously favorable areas and made considerable recovery in areas where weather and feed had been unfavorable. Eastern shipments of early lambs from California were small, but slaughter within the State was larger than last year because of adjustments in lamb and mutton quotas of California packers. Late lamb crop prospects are mostly favorable.

Inspected slaughter of lambs and sheep in April totaled nearly 1½ million head, 7 percent less than a year earlier. On the other hand the January-April slaughter totaled only 1 percent less than a year earlier but 11 percent greater than the 1932-41 average for the period.

FEED: Supply Prospects

Up to June the 1943 growing season was less favorable for feed crops than during the corresponding period in 1942. Although hay and pasture conditions are a trifle better than the average for the past 10 years, they are below those of 1942. Wet and cold weather over much of the Corn Belt delayed the planting and growth of the corn crop.

Assuming average yields on this year's intended acreages, the 1943-44 supply of feed grains, including wheat and rye, probably will be about 10 percent smaller than the 1942-43 supply. The average or larger movement of corn and other feed grains into commercial channels during April and May was not adequate to meet the strong demand for feed throughout the country. In addition to these large marketings, the Commodity Credit Corporation released about 99 million bushels of wheat for feed purposes during the first 4 months of 1943. Yet the demand for feed grains is and will be greater because of increased livestock numbers and favorable returns to producers. Thus the following changes in the 1943-44 feed situation are in prospect: (1) Increase in use of supplementary forages and winter pastures; (2) Feeding of livestock, especially hogs, to lighter weights; (3) Reduction in supplies of Corn Belt corn for shipment to deficit areas; and (4) Reduction of the carry-over of 1943-44 feed grains to a minimum.

Although the 1942-43 supply of feed grains and concentrates was the largest on record, livestock production has also

been at a record level during the past year and has caused an unprecedented disappearance of all kinds of feed. Since early 1942 practically all of the Commodity Credit Corporation's corn has been sold for feed purposes, in addition to 225 million bushels of wheat. Feed prices have increased since the war started, but during 1942 price regulations and large supplies tended to keep feed prices low in relation to livestock prices. On May 8 ceilings on mixed feeds were revised to permit retail mark-ups of \$5.50 per ton for mixed dairy feeds, \$7 per ton for hog feeds and laying mash, and \$10 per ton for chick feeds. The former mark-up was a fixed \$7.50 per ton for all these feeds. Because dairy feed sales are much larger than chick feed sales this new schedule reduces the total retail margin for all mixed feeds sold.

The concentrate feed picture is hardly more encouraging. Combined production of four principal oil cakes and meal was 34 percent larger during the first quarter of 1943 than for the same period of 1942. Because of large soybean shipments to the South for crushing, for example, soybean meal production was up 85 percent in the first quarter of 1943. But the disappearance of these feeds was up about as much as production and was the largest on record. Disappearance of other vegetable proteins was up about 5 percent during the first quarter of 1943 while wheat millfeed disappearance was up 15 percent. The larger millfeed disappearance reflects increased production of flour milling for lend-lease and domestic requirements, and increased production of granular flour for alcohol.

FATS AND OILS: Production

Production of fats and oils from domestic materials in last season's crop year (1942-43) is now estimated at less than 11 billion pounds, about 1 billion pounds less than the previous estimate of last December but 1 billion pounds

more than the 1941-42 production. Vegetable oil production estimates have been revised downward because of the volume of soybeans unharvested at the beginning of winter, the use of large quantities of ground soybeans as livestock feed, the unprecedented demand for peanuts for use in peanut butter, peanut candy and assalted nuts. Animal fat production estimates have likewise been reduced downward because of smaller hog and livestock slaughter in federally inspected establishments than previously anticipated, scarcity of meat scraps for rendering in Eastern areas, and much smaller yield of lard per hog than in 1941-42 despite heavier weights of hogs marketed.

Loss of Far Eastern imports in 1942 transformed the United States fats and oil situation from comparative abundance to limited supply. Even the 10 percent increased domestic production during the 1942 crop year did not meet the sharply mounting fats and oils requirements stimulated by war needs and rising incomes. In September 1942 a War Production Board order limited the manufacturing uses of fats and oils to conserve supplies and in March 1943 direct consumer rationing of food fats and oils began. December 1941 price ceilings on fats and oils were revised upward on several occasions during 1942. Now all fats and oils including linseed oil are covered by specific price ceilings.

Consumption of fats and oils by the drying industries (producers of paint, varnish, linoleum, oilcloth, and printing ink) has declined moderately from the record high level of 1941, chiefly because of reduced building activity.

VEGETABLES, FRUITS

The truck crop production situation has improved somewhat during the last month. The inclement weather which depressed prospects in the early spring has not improved in all areas by any means, but the general picture is fair. While rains benefited truck crops in most South Atlantic and South Central States, floods and hail de-

stroyed crops on considerable low-land acreage and damaged additional acreage, especially in Arkansas and Oklahoma. Although sunshiny days offset cool nights in California, the temperature in western and northern States generally continued to be too low for optimum growth and rains delayed field work. But commercial truck crops in most sections are reported to have been benefited by more favorable growing conditions the first half of May.

Conditions in Texas were helped by rains, although South Texas still needs moisture; and rains brought better prospects to other South Central States and to Florida.

The combined 1943 production of commercial truck crops for which estimates have been made to date (excluding commercial early potatoes and strawberries) is 13 percent below the corresponding production in 1942, and 3 percent above the 10-year (1932-41) average. Heavier supplies than last year's are estimated for snap beans, carrots, and kale. Other crops have been or will be in lighter volume.

In the fruit crop, Department of Agriculture reports indicate that production of grapes, plums, prunes, and figs will be average or greater. Smaller crops are indicated for peaches, sweet cherries, California apricots, and pears. The winter and spring freezes that appear to have so greatly diminished peach prospects also hurt the pear crop and, to a certain extent in Eastern areas, the apple crop.

The War Food Administration on May 21 announced the appointment of three commodity committees to aid in the administration of the Federal Marketing Agreement program regulating the handling of fresh Bartlett pears, plums, and Elberta peaches grown in California. The growers comprising these groups will make nominations from which the War Food Administration will select 13 growers to serve with 12 shippers on an over-all control committee.

WOOL: Production

Nearly all the world's wool production is now controlled by the United Nations. Areas now held by the Axis produced only 15 percent of the world's wool during 1934-38, while the United Nations produced 67 percent and neutral countries 18 percent. The Southern Hemisphere is now the principal surplus producing area. Australia, New Zealand, South Africa and South America together produce about three-fifths of the world clip. The United Nations conquest in North Africa has further decreased the quantity of wool available to the Axis.

World production has increased during the war. Production declines in Europe and Asia have been more than offset by an increase of 10 percent in other areas. World production in 1942 was estimated at 4.1 billion pounds (grease basis), compared with 3.9 billion pounds in 1938.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products ¹
1942			
January	149	146	102
February	145	147	99
March	146	150	97
April	150	151	99
May	152	152	100
June	151	152	99
July	154	152	101
August	163	152	107
September	163	153	107
October	169	154	110
November	169	155	109
December	178	156	114
1943			
January	182	158	115
February	178	160	111
March	182	161	113
April	185	162	114
May	187	163	115

¹ Ratio of prices received to prices paid, interest, and taxes.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		May 1942	April 1943	May 1943	Parity price, May 1943
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....cents.	88.4	83.3	99.8	122.3	122.8	144.1
Corn (bushel).....do.	64.2	65.6	81.4	100.2	103.4	104.6
Oats (bushel).....do.	39.9	32.5	51.6	61.1	61.2	65.0
Rice (bushel).....do.	81.3	72.7	¹ 178.6	182.5	179.6	132.5
Cotton (pound).....do.	12.4	10.04	19.17	20.13	20.09	20.21
Potatoes (bushel).....do.	69.7	75.3	114.8	166.8	190.7	118.4
Hay (ton).....dollars	11.87	8.33	10.82	12.61	12.66	19.35
Soybeans (bushel).....do.	¹ .96	.92	1.73	1.67	1.72	¹ 1.56
Peanuts (pound).....cents.	4.80	8.48	6.30	6.98	7.01	7.82
Peanuts for oil (pound).....do.	² 2.35		4.11			³ 3.83
Apples (bushel).....dollars	.96	.89	1.56	2.15	2.40	1.56
Oranges, on tree, per box.....do.	¹ 1.81	1.11	1.11	2.03	2.35	¹ 1.88
Hogs (hundredweight).....do.	7.27	8.88	¹ 13.27	14.35	13.90	11.85
Beef cattle (hundredweight).....do.	5.42	6.56	¹ 10.60	13.03	12.91	6.83
Veal calves (hundredweight).....do.	6.75	7.80	¹ 12.39	14.25	14.30	11.00
Lambs (hundredweight).....do.	5.88	7.70	¹ 11.60	13.88	13.83	9.58
Butterfat (pound).....cents.	26.3	29.1	38.6	51.3	50.6	⁴ 40.6
Milk, wholesale (100 pound).....dollars	1.60	1.81	¹ 2.39	3.04	⁴ 3.01	² 2.85
Chickens (pound).....cents.	11.4	14.9	18.4	24.6	24.7	18.6
Eggs (dozen).....do.	21.5	21.7	26.5	33.7	34.2	² 25.7
Wool (pound).....do.	18.8	23.8	¹ 40.8	41.2	41.4	29.8
Tobacco.....do.						
Maryland, type 32 (pound).....do.	⁷ 22.9	17.6	29.8		46.0	23.8

¹ Revised.

² Comparable base price, Aug. 1909-July 1914.

³ Comparable price.

⁴ Comparable base price, August 1919-July 1929.

⁵ Adjusted for seasonality.

⁶ Preliminary.

⁷ Base price crop years 1919-23.

POULTRY, EGGS: Production

Production of eggs on farms in May was 12 percent larger than in April 1942 despite a 2 percent lower rate of egg production per bird. The number of layers on farms was up 14 percent.

Food Distribution Order 40, as amended, prohibits the storing of shell eggs except for (1) fulfilling Government contracts for spray dried whole eggs and (2) maintaining small working inventories. Relatively large quantities of shell eggs were stored during February and March and total stocks May 1 were larger by 1.6 million cases or 34 percent than stocks a year earlier despite a decline of into-storage movement in late April. In mid-May stocks of shell eggs at 35 markets were 20 percent larger than a year earlier.

Of the 847 million pounds of eggs dried in the calendar year 1942, 112.4 million pounds were from storage shell eggs, 115.8 million pounds from frozen eggs, and 618.6 million pounds from fresh shell eggs. Food Distribution Order 41 provides that liquid or frozen egg production for other than Government account or for purposes other than drying shall not exceed the quantities produced in the seasonal year 1942 for purposes other than drying. A considerable part of the 172 million pounds of frozen eggs in the United States on May 1 was earmarked for drying later in the year. During the first 4 months of 1943, 160 million pounds of frozen eggs were produced compared with 118 million pounds in the corresponding period of last year.

Production of dried eggs in April totaled 28.3 million pounds compared with 23.4 million pounds in March and 22.5 million pounds in April 1942. Dried-egg production in the first 4 months of 1943 totaled 84.5 million pounds compared with 67.6 million pounds in the corresponding period last year. Offerings of dried eggs for sale to the Department of Agriculture increased somewhat in April and early

May but have been heaviest for the delivery months in late fall and winter. On May 15, the Food Distribution Administration announced that until further notice dried eggs would be purchased for next December and January delivery only from those firms whose individual total offerings for each of those 2 months do not exceed deliveries to the Food Distribution Administration in April and May, respectively.

Although total marketings of young chickens from specialized producing areas apparently have continued larger than a year earlier, supplies of both live and dressed chickens have been considerably short of demand. From March to April the reduction in the numbers of fowl on farms was 40 percent larger this year than last. This is about normal, but available data indicate smaller than average receipts of fowl at primary markets and probably reflect increased diversion of fowl to consumer channels of trade before reaching packing plants.

WHEAT: Total Loans

The final report on the 1942 Wheat Loan Program, issued May 24, shows that the Commodity Credit Corporation through May 15 had made 533,710 loans on 406,213,333 bushels of 1942 wheat in the amount of \$459,014,060.70. Wheat loans include those on 184,048,000 bushels stored on farms and on 222,158,000 bushels stored in warehouses. Liquidations as of May 18 amounted to 107,980,474 bushels of which 4,888,594 bushels were delivered to the Commodity Credit Corporation. The 1942 loans outstanding account for 136,859,701 bushels on farms and 161,366,107 bushels in warehouses.

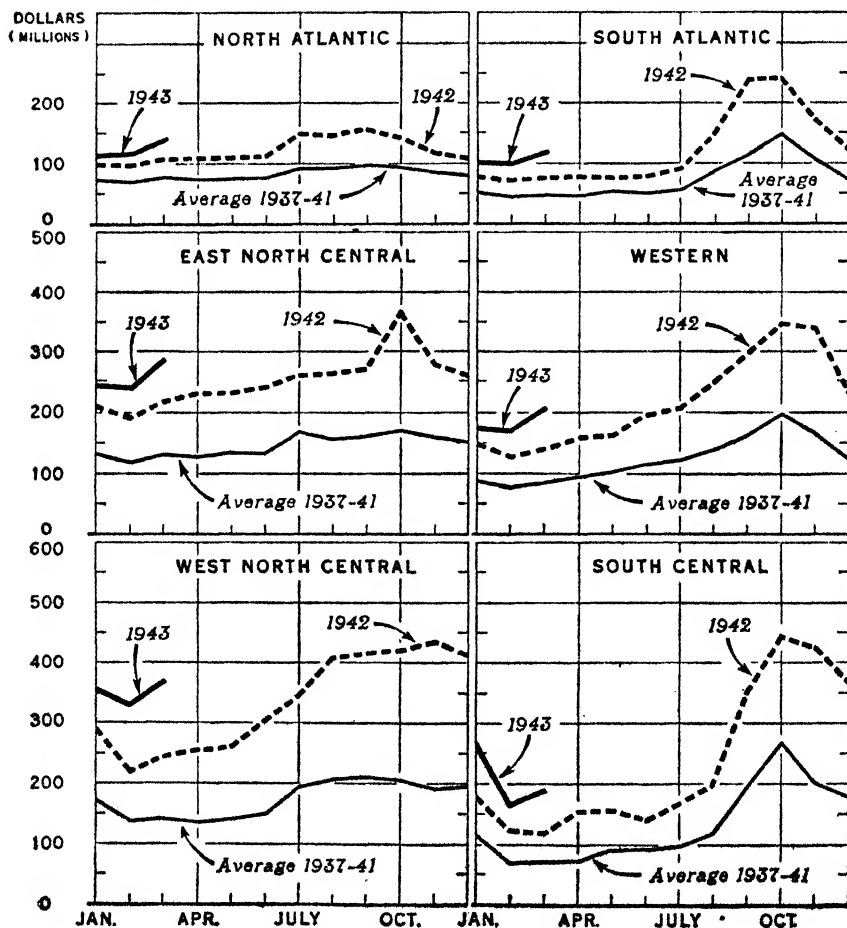
The wheat export program, under which payments were made for wheat exported to designated foreign countries, was suspended May 14. Suspension was decided upon by War Food Administration officials in order to conserve United States wheat supplies.

INCOME: Continued Rise

The sharp rise of seasonally adjusted indexes of cash income from farm marketings has continued steadily with only minor interruptions since May 1940. The major part of the increase has been due to advancing prices, but farm marketings have also increased sharply since 1940. During the first quarter of 1943, the total income from farm marketings was 3,690 million dollars—35 percent higher than during the same period a year earlier. All groups of farm products recorded sharp increases in income.

With prospects pointing to a volume of agricultural production in 1943 only slightly larger than in 1942, and with prices of many farm products at their ceilings, it appears probable that the increase in farm income during the next few months may be little if any more than the usual seasonal amount. Movement of farm income and prices over the next few months will depend in large measure on the effect of recently expanded governmental controls and on the normal tendency of prices to rise as a result of increasing consumer, military, and lend-lease demands.

CASH INCOME FROM FARM MARKETINGS, BY REGIONS, 1942-43 COMPARED WITH 1937-41 AVERAGE



FARMERS REDUCE DEBT LOAD

With the wartime expansion in their incomes farmers generally have been paying off old obligations and reducing the volume of farm debt as a whole. Preliminary estimates indicate that farm-mortgage indebtedness in 1942 declined by about 360 million dollars to a total of \$6,350,000,000. In the same period, farmers' borrowings on nonreal-estate security also decreased slightly, despite the substantial rise in production costs.

This is a picture far different from that during World War I. Agricultural indebtedness then increased sharply. Farm mortgage debt increased from 4.7 billion dollars to 6.5 billion dollars, or about 1.8 billion dollars, from the beginning of 1914 to the beginning of 1918 (table 1.) In about the same period, farmers increased their non-real-estate loans at commercial banks from \$1,608,000,000 to \$2,507,000,000.

The reduction of 360 million dollars in farm-mortgage indebtedness in 1942 was 3 times the average annual decline of 119 million dollars for the three preceding years. These reductions are a continuation of the downward trend that has been in effect since 1923, when total farm-mortgage debt was at its peak of \$10,786,000,000.

As debt liquidation by foreclosure and related distress transfers is now of much less significance than a few years ago, the large decline in farm-mortgage debt in 1942 is attributable primarily to excess of cash principal repayments over new mortgage borrowing. The Farm Credit Administration reported repayments of principal on land bank and Commissioner loans in 1942 amounting to more than 300 million dollars, or more than 3½ times the volume of these loans made in the year. Individual life insurance companies also reported large principal repayments during 1942, although the total of new loans recorded by all life-insurance companies practically offset their principal repayments.

ADEQUATE data are not available to determine what proportion of the estimated \$762,772,000 of farm mortgages recorded in 1942 represented replacements of existing mortgage-debt contracts with new ones. Even if as much as one-half of the 1942 recordings were of this character, however, the net decline of 360 million dollars in mortgage debt would have been possible only if cash principal repayments during the year amounted to 750 million to 800 million dollars. Cash principal repayments of this magnitude would be enough to cover 11

Table 1.—Changes in Outstanding Farm-mortgage Debt and in Related Series, World War I and World War II

Year		Outstanding farm-mortgage debt ¹		Value per acre of farm real estate (1912-14=100) ²		Volume of farm mortgages recorded ³		Cash farm income ⁴	
World War I	World War II	World War I	World War II	World War I	World War II	World War I	World War II ⁵	World War I	World War II ⁵
		Million dollars	Million dollars	Percent	Percent	Million dollars	Million dollars	Million dollars	Million dollars
1914.....	1939.....	4,707	7,071	103	84	1,403	729	6,015	8,608
1915.....	1940.....	4,991	6,910	103	84	1,486	772	6,391	9,106
1916.....	1941.....	5,256	6,824	108	85	1,883	634	7,755	11,754
1917.....	1942.....	5,826	6,714	117	91	2,017	763	10,648	16,138
1918.....	1943.....	6,587	6,350	129	99	1,948	-----	13,404	-----
1919.....	-----	7,137	-----	140	-----	2,939	-----	14,436	-----
1920.....	-----	8,449	-----	170	-----	3,620	-----	12,553	-----

¹ Beginning of year.

² As of March 1.

³ Calendar year.

⁴ Estimated by the Farm Credit Administration.

⁵ Includes Government payments.

⁶ Preliminary.

percent of the mortgage debt outstanding at the beginning of 1942.

Outstanding Federal land bank and Commissioner loans declined 245 million dollars in 1942, a reduction of about 10 percent (table 2). The net decline in life insurance company holdings of farm mortgages was nominal in 1942, but this does not necessarily mean that the rate of cash principal repayments on these loans was lower than for the federally sponsored agencies. Land bank and Commissioner loans closed in 1942 were about 20 percent less than in 1941, whereas estimated mortgage recordings of life insurance companies were only about 4 percent less. Insured commercial banks' holdings of loans secured by farm real estate declined from 535 million dollars at the beginning of 1942 to 477 million dollars at the beginning of 1943, a reduction of 11 percent. Tenant-purchase and other real estate loans of the Farm Security Administration increased during 1942; the total for these types of loans reached 164 million dollars at the beginning of 1943, or about 3 percent of total farm-mortgage debt on that date. The balance of the farm-mortgage loans held principally by individuals and other miscellaneous local lenders amounted to 2,707 million dollars at the beginning of 1943, a decrease of about 3 percent during the year.

Although the large decline in total farm-mortgage debt during 1942 indicates that many farm owners were making substantial payments on their mortgage indebtedness, this does not necessarily mean that all farm owners were in a safer debt situation at the beginning of 1943 than a year earlier. The volume of mortgages recorded in 1942 was equal to about 11 percent of outstanding loans at the beginning of 1942. These newly recorded mortgages may thus reflect higher land values and optimistic farm-income prospects. Substantial increases in the average size of loans recorded are reported in many areas. The decline in total debt, therefore, does not preclude the possibility that particular farm owners may have assumed heavy mortgage debts in 1942, as was done widely in the comparable period of World War I.

SIMILAR in trend to farm-mortgage debt, the non-real-estate farm debt held by banks increased rapidly from 1914 to 1920, when it reached a peak of \$3,869,891,000. Thereafter, the total outstanding decreased until 1937, when the amount outstanding was slightly less than 600 million dollars, or about 15 percent of that in 1920. Between the two latter dates, a number of federally sponsored agricultural credit agencies were established. These held 467 million dollars

Table 2.—Farm-Mortgage Loans Held by Principal Lender Groups, January 1, 1939–43

Year	Total farm-mortgage debt	Amounts held by lender groups				
		Federal land banks and Land Bank Commissioner	Life insurance companies	Insured commercial banks	Farm Security Administration ¹	All others
	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars	Million dollars
1939	7,071	2,723	887	519	15	2,927
1940	6,910	2,584	883	534	39	2,870
1941	6,824	2,488	891	543	72	2,830
1942	6,714	2,350	907	535	122	2,900
1943	6,350	2,105	897	477	164	2,707

¹ Tenant-purchase and development loans plus construction and special real estate loans.

² Preliminary.

of non-real-estate loans on January 1, 1937. With this total added to the amount held by commercial banks on the same date, the over-all total was about one-third of the 1920 figure.

Since 1937, the total amount of non-real-estate loans to farmers has increased sharply (table 3). However, the lending associated with the financing of farm enterprises, excluding loans guaranteed either directly or indirectly by the Commodity Credit Corporation, has tended to level off since the beginning of the war. The total of these loans appears to be slightly lower at the beginning of 1943 than a year earlier.

During 1942, production credit associations loaned \$477,715,000 but at the end of the year their loans outstanding totaled \$184,662,000, or 2 percent less than a year earlier. During the first quarter of 1943, production credit associations loaned \$139,411,000, compared with \$127,645,000 in the corresponding quarter of 1942.

Rural rehabilitation loans (not including loans from State trust funds) made by the Farm Security Administration in 1942 totaled \$108,316,000, compared with \$103,743,000 in the previous year. Repayments in 1942 amounted to \$82,803,000, or about 13 percent higher than a year earlier.

IN 1943, a new source of production credit has been made available to farmers through the reopening of the

Regional Agricultural Credit Corporation of Washington, D. C., by the Farm Credit Administration. Loans are of two types: (1) loans to farmers who are unable to obtain credit from other sources, and (2) advances for the cash costs of production of designated essential war crops, obligations for repayment of which are limited to an amount equal to the returns from the crop if the borrower has otherwise complied with the conditions established for obtaining such advances. As of May 15, loans of the first type had been approved in the amount of \$25,721,000. Advances of the second type had been approved in the amount of \$19,010,000 on the same date. The actual amount of outstanding loans and advances under this program, after making allowance for a nominal amount of repayments, totaled \$31,745,000.

Farmers' use of non-real-estate credit has been influenced, on the one hand, by their improved cash position, and, on the other, by the sharply reduced supply of equipment available for purchase and restrictions on new construction and repairs. Livestock and crop financing needs account for the major demands for new credit. In a survey conducted by the Federal Reserve Bank of Chicago, reports from over 600 banks in the States of Illinois, Iowa, Indiana, Michigan, and Wisconsin indicate that the demand

TABLE 3.—Non-real-estate Loans Held by Selected Lending agencies, United States, 1939-43

Beginning of year	Insured commercial banks ¹	Production Credit Association ¹	Other agencies supervised by the Farm Credit Administration ¹	Farm Security Administration	Commodity Credit Corporation
	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars	1,000 dollars
1939.....	1,064,667	146,825	214,643	209,806	308,951
1940.....	1,094,392	153,425	208,116	276,138	* 208,193
1941.....	1,281,275	178,766	207,578	312,717	252,287
1942.....	1,449,937	201,689	207,820	339,083	* 132,614
1943.....	1,641,772	206,873	197,957	359,578	* 105,410

¹ Includes loans to farmers made under purchase agreement with the Commodity Credit Corporation.

² Revised.

³ Excludes certificates of participation.

⁴ Includes loans to processors and dealers directly or indirectly secured by purchase agreement with the Commodity Credit Corporation. Total loans directly or indirectly covered by purchase agreement with Commodity Credit Corporation, \$746,261,000. Other agricultural loans, \$895,511,000.

for short-term agricultural credit from these sources was generally below normal. During the first quarter of 1943, these banks reported that the purposes of the loans made or extended by them were distributed approximately as follows:

	Percent
To buy dairy stock.....	12
To buy shoats and sows....	9
To buy feeders.....	18
To buy feeds.....	14
To carry marketings.....	6
To buy equipment and re- pairs.....	12
To buy real estate.....	12
For personal and family use..	11
Other.....	6

In summary, although many of the current economic factors affecting agriculture—such as the high level of farm income and rising land values—are similar to those of World War

I, the farm-debt position presents some notable contrasts. Farm-mortgage indebtedness at the beginning of 1943 was lower than for any other year since 1917. The sharp reduction in indebtedness in 1942, following a prolonged trend of debt decrease, is in sharp contrast to the rising trend of debt during World War I, when farm-mortgage debt rose over 700 million dollars in the single year of 1917. Short-term indebtedness is appreciably below the amounts outstanding during the previous war and shows no immediate tendency to expand beyond seasonal proportions. Farmers are apparently remembering the acute financial distress that followed from the expanded debt structure of World War I, and many are currently improving their financial position.

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FARM WORKERS FROM MEXICO

EAGER to help the Allies defeat the Axis, thousands of Mexican nationals are pouring into the United States today to produce and harvest Food for Freedom. Often waving little United States and Mexican flags and shouting "Viva, Mexico" and "Viva, Los Estados Unidos," they are crossing the border by rail at the rate of about 2,000 every 8 days. As they arrive, they are speedily distributed to labor-short farms in a large number of vital growing areas west of the Mississippi.

Although Mexican farm laborers are no novelty in the United States, especially in California and the Southwest, the current movements are unique in the history of the two Nations. They are made in accordance with the provisions of an international agreement between the United States and Mexico. This agreement, the first of its kind ever entered into by the United States, was arranged last summer by the State Department, acting at the request and with the advice of the United States Department of Agriculture, when it

became apparent that domestic source of supply would be inadequate to meet the need for seasonal farm workers in all areas. It provides for the orderly emigration and use of Mexican nationals as agricultural laborers here and is designed to protect the interests of both the growers and the workers.

The Department called on the Farm Security Administration to work with the Mexican Government and other United States agencies in selecting Mexican workers, transporting them to the United States, and providing needed health and welfare services.

FIRST Mexican workers transported under the agreement left Mexico City last September 25 to harvest California sugar beets. Through May 9 this year, a total of 17,308 Mexican workers had been recruited and transported, with California receiving the largest number—12,495—and the States of Arizona, Washington, and Idaho the remainder. In addition to sugar beets, the Mexicans have

worked, or are working, in fruits, vegetables, and guayule in California, vegetables in Arizona, and sugar beets in Washington and Idaho, and are now being moved into sugar beet areas of Colorado, Montana, Wyoming, South Dakota, and Nebraska. The War Food Administration, which is now directing and supervising all farm labor activities of the Federal Government, plans to bring in up to about 50,000 Mexican nationals this year as part of the United States crop corps program.

Under the international agreement, the WFA pays for the transportation of the Mexicans to the work area in this country and for their return. The contracts which each worker signs with the WFA on the one hand, and which each employer, or organization of employers, signs with the WFA on the other, provide that the worker shall be paid the prevailing wage for the agricultural work he does, with a minimum of 30 cents an hour, and employment for at least 75 percent of the contract period. Workers also are guaranteed shelter, sanitary and medical facilities of a reasonable minimum standard. If FSA farm labor supply centers are not available, the Mexicans live in growers' housing approved by the WFA. Ten percent of their wages is deducted and sent back to Mexico for deposit to their credit and is handed over to them after their return to Mexico.

Selection machinery in Mexico City is geared to select only healthy, experienced farm workers for transportation to the United States. The workers arrive in groups of from 400 to 1,200 from farm communities in the states of Jalisco, Michoacan, Zacatecas, and Guanajuato at Mexico City. There, in the National Stadium, the men's agricultural experience and character are carefully reviewed and their health checked by representatives of the health, agricultural and immigration offices of both countries. The physical examination includes X-rays of lungs and digestive tract and also a

blood test. No individuals are accepted for contract until they have passed the physical examinations. Applicants may be rejected for health reasons or other causes, including inexperience with farm work.

A TRANSPORTATION crew, representing the WFA, takes charge of the workers when they are put on the train for the United States. Members of this crew arrange for meals and necessary medical attention en route and divide the men into groups of 10, each of which selects its own leader. When the train reaches the border, the first WFA crew returns to Mexico City and takes over, accompanying the workers to their destination points in the United States. The new crew has a list of growers and the number of workers required at each destination, and groups the workers in accordance with this list.

Most growers thus far have expressed themselves as generally satisfied with the Mexican workers they have employed. Last fall, Earl Coke, general manager of California Field Crops, Inc., an organization of sugar beet operators formed to employ the first 3,000 Mexican nationals brought into California, said: "The workers imported from Mexico have saved the sugar-beet harvest in this State." Other employers have issued similar statements. However, as was to be expected, there have been a number of disputes between employers and workers involving such factors as wages, housing, living and working conditions. In most cases, these have been straightened out through on-the-farm mediation, but when this method fails the formal complaint proceeding is brought into use. If either an employer or worker files a complaint against the other, a hearing is held at which the worker and the employer can be represented, as well as the Mexican consul in the area, if he wishes. If the worker is found to be at fault, he is repatriated or transferred to another employer. If the employer

is found at fault, he can be required to remove the cause of the complaint and keep the worker or, if he refuses to do so, suffer the loss of his workers.

Aside from the valuable work the Mexicans have been doing in helping to save war-essential crops, their presence in the United States has done much to solidify the "good neighbor" relationship between the United States and Mexico. This is due in part to the spirit of patriotism and good will of the workers. Before they leave Mexico, they are told that they are "soldiers of the soil" whose job it is to help produce the food needed to defeat

the Axis, that idleness or bad behavior will not be condoned, and that they will receive no sympathy in Mexico if they are repatriated for misconduct. But it is also due to the friendly attitude demonstrated by the people of this country toward them. Celebrations and fetes are held in their honor and educational and recreational programs are arranged for their benefit. As long as this attitude continues, hemispheric solidarity can only be strengthened.

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FOOD COSTS AND CONSUMER INCOMES

COMPARISONS of food prices with income for the average United States consumer show that the rise in consumer purchasing power has far outrun the advance in retail food prices. The series presented in table 1, representing averages per civilian consumer, both nonfarm and farm, include: (1) Cost to consumers at prevailing prices of a "food basket" containing quantities of foods representing average annual consumption for 1935-39 (this series reflects price changes only); (2) actual expenditure for foods reflecting changes in items and quantities purchased as well as changes in prices; (3) total income per consumer; (4) disposable income remaining after deducting direct personal taxes from total income; (5) total expenditures for consumer goods and services but not including taxes and savings. The percentages of income and total expenditures represented by cost of the food basket and by actual food expenditures are also shown.

Throughout the war period, retail food prices have risen less rapidly than average consumer incomes. The aver-

age United States consumer today finds that he can purchase a "food basket" of specified foods for a smaller share of his income than at any period of record. This is true even when cost of the "food basket" is compared with the consumer's "disposable" income remaining after paying direct personal taxes.

Actual food expenditures per consumer advanced much more rapidly than food prices during 1941 and 1942, reflecting the shifts toward higher standards of food consumption accompanying higher levels of income. Farmers contributed to the higher standards by producing larger quantities of food products for civilian consumption.

The farmer's share of the consumer's dollar spent for specified foods is rapidly nearing the record high levels of World War I, reaching 57 cents in February 1943. This rise in the farmer's share has been associated with the advance in food prices at retail and farm levels and has been favored by stability in marketing charges of middlemen, which have not risen in line with prices.

TABLE 1.—Food Cost and Expenditure Compared With Total and Disposable Income and Total Expenditures per Person, United States Average, Specified Periods

Year and month	Total income ¹	Dis-posable in-come ¹	Total ex-pen-ditures for goods and serv-ices ¹	Food expenditures				Cost to consumer of fixed quantities of food repre-senting average annual consumption per person, 1935-39			
				Ac-tual ¹	As percentage of			Ac-tual ²	As percentage of— ²		
					Total in-come	Dis-posable in-come	Total ex-pen-ditures for goods and serv-ices		Total in-come	Dis-posable in-come	Total ex-pen-ditures for goods and serv-ices
1913.....	Dol. 340	Dol.	Dol.	Dol.	Pc.	Pc.	Pc.	Dol. 95	Pc. 28	Pc.	Pc.
1914.....	333							100	30		
1915.....	393							101	26		
1916.....	477							115	24		
1917.....	471							147	31		
1918.....	542							166	31		
1919.....	579							192	33		
1920.....	628							201	32		
1921.....	506							142	28		
1922.....	531							138	26		
1923.....	599							144	24		
1924.....	610							143	23		
1925.....	645							155	24		
1926.....	659							155	24		
1927.....	655							150	23		
1928.....	664							150	26		
1929.....	679	655	583	150	23	24	27	149	22	23	26
1930.....	595	574	527	143	24	25	27	139	23	24	26
1931.....	500	480	437	120	24	25	27	112	22	23	26
1932.....	380	366	345	94	25	26	27	92	24	25	27
1933.....	368	354	341	91	25	26	27	93	25	26	27
1934.....	418	403	377	100	24	25	27	105	25	26	28
1935.....	460	442	410	105	23	24	26	116	25	26	28
1936.....	531	508	461	113	21	22	25	115	22	23	25
1937.....	561	536	485	119	21	22	25	119	21	22	25
1938.....	509	484	451	113	22	23	25	108	21	22	24
1939.....	541	517	471	114	21	22	24	106	20	21	23
1935-39 average.....	520	497	456	113	22	23	25	113	22	23	25
1940.....	579	554	497	121	21	22	24	107	18	19	22
1941.....	692	662	560	140	20	21	25	121	17	18	22
1942.....	857	807	612	176	21	22	29	144	17	18	24
Annual rates by months, seasonally adjusted											
1942:											
February.....	780	751	591	160	20	21	27	136	17	18	23
June.....	844	802	580	169	20	21	29	142	17	18	24
October.....	905	845	652	196	22	23	30	149	16	18	23
1943:											
January.....	971	895	658	195	20	22	30	154	16	17	23
February.....	992	911	684	202	20	22	30	155	16	17	23

¹ Calculated from data prepared in the Bureau of Foreign and Domestic Commerce. Total income is national income payments to individuals per capita of United States population, including all armed forces. This average is approximately equal to income per capita of civilian population, differing by less than 1 percent in 1942. Disposable income is total income less direct personal taxes. Total expenditures for goods and services are averaged over United States population excluding armed forces abroad. Actual food expenditure is total amount spent for foods (excluding alcoholic liquors) in retail stores, eating places and elsewhere, plus allowance for value of home-produced foods, per capita of United States civilian population. This expenditure reflects changes in quantities and types of foods purchased and in payment for preparation, service, and entertainment at eating places in addition to changes in food prices.

² Cost to consumers of quantities of foods representing average annual consumption per person during 1935-39 is calculated by taking as a 1935-39 base the actual food expenditure for that period (\$113) and applying to this base cost the changes in a United States average consumers' food price index. The latter index is a weighted average of indexes representing (1) retail food prices in 51 cities (United States Bureau of Labor Statistics); (2) retail food prices in other cities and towns and (3) prices received by producers applied to foods consumed on farms where produced. This series reflects the part of changes in food cost due solely to changes in food prices.

³ These percentages show what share of consumers' income would be required to purchase identical quantities of the same foods (1935-39 average consumption) at prices prevailing during each year and month.

Bureau of Agricultural Economics.

INCREASES in food prices paid by consumers at retail are usually associated with increases in prices paid to farmers who produce these foods. Price increases are ordinarily brought about by rising levels of consumer demand, as a result of increased income, or by a reduction in the supply of foods available for consumption. In most cases price behavior at levels of marketing below the retail is motivated by anticipation of what the consumer can and will pay for available supplies. Prices paid to farm producers also depend upon the total charges per unit paid for the marketing services required to transfer food products from producers to consumers. These charges constitute the "spread" between the retail price and equivalent value at the farm.

In order to view the food cost situation in proper perspective it is necessary to compare food price trends with food expenditures and with consumer incomes. Food prices take on new meaning when compared with the fund of consumer purchasing power. This comparison has been made on the basis of the average civilian consumer and the results are shown in Table 1.

Because 1935-39 was chosen as a base, the "food basket" cost equals the actual food expenditure for that period. Through the recent war years and into 1943 the "food basket" series measures the increased cost of foods which may be ascribed to higher retail food prices. Retail prices of farm food products in turn are related to the combined effects of changes in prices paid farmers and changes in charges for marketing.

Although average cost to consumers of the "food basket" in 1935-39 amounted to 22 percent of total income per consumer, or 23 percent of "disposable" income remaining after payment of direct personal taxes, by the end of 1942 average consumer income had so far outdistanced retail food prices that the same "food basket" could be purchased for only 16

percent of total income or 17 percent of disposable income.

ACTUAL food expenditures by all civilians, farm and nonfarm, in 1935-39 amounted to 22 percent of income, and dropped to 20 percent of the high income level reached in February 1943. Compared to disposable income, food expenditure was 23 percent for 1935-39 and 22 percent in February 1943. In comparison with total consumer expenditures for all goods and services, the food expenditures show an increase from 25 percent of total expenditures for 1935-39 to 30 percent for February 1943. The trends in these percentages show that food expenditures have risen more rapidly than total consumer expenditures but less rapidly than consumer income.

From 1935-39 to February 1943 the rise in actual expenditure for foods by the average consumer was more than double the rise in retail food prices. During this period retail food prices advanced by 37 percent, the consumer's "food basket" costing \$113 on the average for 1935-39 and \$155 in February 1943. Actual expenditures per person affected by changes in items purchased as well as in prices, rose by 78 percent during the same period, reaching an annual rate of \$201 in February 1943.

What significance lies in the excess of the food expenditure increase above the food price increase? This excess reflects, first of all, a considerable advance in the standard of food consumption. With income rising faster than food prices, consumers have purchased larger quantities of foods made available by record farm production, and have purchased increasing proportions of foods at eating places. More food costs more money even though prices show no change, and purchases of foods at eating places must include payments for preparation and service (and sometimes for entertainment) in addition to cost of foods as sold in retail stores. Reasons

for more eating in restaurants include (1) more women working in industry, (2) men working in cities away from their families, and (3) higher incomes. However, developments of this sort work real advances in levels of living, measured roughly by the excess of the food expenditure increase above the food price increase. For February 1943 in comparison with 1935-39 this excess amounts to 30 percent.

ASSUMING food consumption in February 1943 was near the 1941 and 1942 levels, this excess expenditure included increased quantities of food purchases to the extent of about 10 percent above the average for 1935-39. The rest of the 30 percent excess in food expenditure over cost of the "food basket" must be ascribed to shifts in the patterns of food consumption toward items of higher quality and more extensive preparation and toward purchases in higher-priced outlets.

Food expenditures have become relatively more important in the total of all consumer expenditures for goods and services, rising from 24 percent of the total for 1940 to 30 percent in early 1943 (table 1). With prospect for nonfood civilian goods and services to dwindle in supply, but for the supply of foods to be maintained near pre-war 1935-39 levels, this percentage will rise during 1943 and 1944 even

though there is no further advance in retail food prices.

Food expenditures as a percentage of total expenditures may easily be misinterpreted by the casual reader. The rise in this percentage is due in part to the reduction in supplies of nonfood goods and services, as well as to the rise in food expenditure. The rise in the percentage also reflects the maintenance of food supplies for civilian consumption. If food supplies were cut as drastically as supplies of other goods the percentage would fall.

These trends show that food is becoming relatively more important in consumers purchases and "cost of living." There is a tendency, indicated in table 1, for consumers to spend a fairly constant percentage of income for foods, ranging from a high of 25 percent in 1932 and 1933 to a low of 20 percent in early 1943. During the war period, shrinking supplies of non-food goods and services together with price controls make it impossible for consumers to spend as much of their income for these goods as they would desire, and leave a growing surplus of free cash which they may use for food purchases under the limitations of rationing and available supplies. Nevertheless, in terms of current consumer incomes, food prices represent the best bargain in 30 years.

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GRAIN STORAGE CAPACITY AND STOCKS

WITH 1943 production goals calling for a total harvest of around 5½ billion bushels of grain crops, soybeans, dry beans, and flaxseed, adequate storage space for these crops and for reserves on hand at harvest time is a basic essential. Successive large crops and the building up of reserves in the last few years have brought increases in the facilities for handling and storing these crops. As a result, the country is in good position to handle the 1943 output.

The following paragraphs present a summary of the grain storage capacity and stocks situation as of April 1. On this date the 22,289 establishments engaged in handling, processing, and storing grain crops, soybeans, dry beans, and flaxseed, were reported by the Crop Reporting Board as having a total capacity of 1,667,192,000 bushels. The 1943 capacity was 66 million bushels more than the total capacity of 1,600,827,000 reported in February 1942. This gain represented new

construction completed in 1942 and the use of emergency storages facilities to house the huge 1942 grain crop. The increase more than offset losses from fire and other causes and from diversion of space to nongrain storage uses.

Bulk storage capacity was 1,344,-561,000 bushels, compared with 1,270,-782,000 bushels on February 16, 1942. Capacity for sacked storage amounted to 307,990,000 bushels, as against 315,184,000 bushels in February 1942. The decrease in capacity for sacked storage was caused by a shift of some space to bulk storage by diversion of some space to military and industrial uses.

ALTHOUGH no exact figures as to storage facilities on farms are available, the estimates of farm stocks of different grains held as of October 1 and December 1, 1942, and January 1, 1943, give some indication of the amount of space available. Combined farm stocks of wheat, oats, barley, and rye, with adjustments for disappearance, indicate that approximately 2½ billion bushels of storage space was in use for these grains. In addition, farm stocks of corn on last January 1, totaled 2,277,332,000 bushels, suggesting a total corn storage capacity of about 2½ billion bushels. Such a capacity for corn would represent all types of storage, including both permanent and temporary cribs, as well as some tight bin space for shelled corn. Aside from this combined total of 4¼ billion bushels of storage space on farms, farmers probably were storing another 150 million bushels of soybeans, flaxseed, rice, dry beans, dry peas, and grain sorghums. From these rough approximations, total farm storage capacity could be estimated at around 4,900,000,000 bushels, of which 2½ billion bushels is suitable largely for storing corn only.

Total capacity of steel and wooden bins owned by the Commodity Credit Corporation on or about April 1, amounted to 174,236,000 bushels, or about 9 percent of the storage capacity

located off farms. Of this total, 53,872,000 bushels represented the capacity of steel bins mostly in the Corn Belt States from Illinois westward, and the remainder was the capacity of wooden bins located in the Corn Belt and the principal wheat States west of the Mississippi. These bins held 83 million bushels on April 1—48 million bushels of wheat, 22 million of corn, and 13 million of soybeans.

Combining the storage space figures for the different positions, the aggregate capacity of all storages both on and off farms, is indicated to be about 6,741,000,000 bushels. Excluding corn storage capacity of 2½ billion bushels on farms and 15 million bushels of crib storage off farms, very little of which could be used to store other grain crops, total storage capacity for small grains, soybeans, flaxseed, etc., would amount to 4,226,000,000 bushels.

THE total storage capacity of about 6¾ billion bushels includes a sizeable amount of temporary and emergency storage capacity. Farm storage capacity is more or less flexible, because space used for storing crops may be increased or decreased, depending on the size of the harvest. In emergencies, farm buildings generally devoted to uses other than for grain storage can be converted to shelter grain crops. Likewise, inexpensive temporary structures, although not offering the best protection, are satisfactory for short-time storage and can be built quickly. To provide shelter for the record 1942 crop and the carry-over from previous crops, United States farmers probably mustered into service more storage space than in any other year in history.

The record 1942 crop, piling on top of a large carry-over, rapidly filled existing storages and necessitated an expansion in grain storage facilities both on and off farms. On farms, new bins and cribs were built, abandoned farm buildings were fixed up, and other buildings were converted to

hold grain. Off the farms, grain handlers constructed additions to elevators and warehouses and converted old store and garage buildings, armories, etc., to suitable temporary storage space. Grain was rolling in from the field in greater quantities than the facilities were able to accommodate it. Much grain was piled on the ground or put in partly protected inclosures awaiting completion of new storage structures and the flow of grains to consumers.

The term, "bread basket," frequently applied to the great basin of the Mississippi River and its tributaries is quite appropriate because of this area's importance as a storehouse for the Nation's food supplies. In the triangular area from Ohio and Michigan in the east to Montana on the west, and Texas on the south, total storage capacity could be roughly estimated at 5,307,000,000 bushels, including corn storage space for about 2,100,000,000 bushels. In this area the capacity of establishments engaged in handling, storing, and processing grain crops amounted to 1,074,352,000 bushels—65 percent of the United States total storage of this kind. Farm storage capacity, excluding that used for corn, approximated 1,950,000,000 bushels, or 81 percent of farm storage for the entire country.

FOR the United States combined April 1, 1943 stocks of wheat, corn, oats, rice, and soybeans in all positions were 3,079,877,000 bushels. Complete information is not available on April 1 holdings of barley, rye, dry beans and peas, flaxseed, and grain sorghums, but these probably were large enough to raise the total of all these stocks to 3.4 billion bushels, or 50 percent of the total aggregate capacity of 6½ billion bushels. On April 1, farm stocks of corn were 1,395,112,000 occupying slightly over half of the corn storage capacity on farms. This would leave some 2 billion bushels of small grains, soybeans, flaxseed, dry beans and peas, and grain

sorghums held in storages with a capacity of 4,226,000,000 bushels, mostly tight bin space.

Total stocks of nine principal crops, representing probably close to 95 percent of the total quantities of unprocessed grains, soybeans and flaxseed held in commercial positions, amounted to 795,129,000 bushels on April 1, 1943, compared with 905,290,000 bushels on February 16, 1942. Because the estimates do not relate to the same date in the 2 years, the difference in total stocks amounting to 110,161,000 bushels does not mean that the storage situation has eased by this difference plus the increase in storage capacity. For example, last year wheat stocks on February 16, 1942, totaled 595 million bushels, but by April 1, they had decreased to 547 million bushels. Likewise seasonal decreases in holdings of other grains occurred. Information on disappearance of other grains between February 16 and April 1 last year is not available.

If, however, the aggregate change was about the same as for wheat, which constituted over 60 percent of the February 16, 1942 stocks, the total stocks on April 1, 1942, would have been about 833 million bushels. If 20 percent of the increased storage capacity is deducted for working space, it would appear that the commercial storage situation had eased by about 91 million bushels.

Although farm stocks of wheat, corn, and oats on April 1 this year were larger than on the same date last year, the current rapid disappearance of these grains should make available for farm storage at least as much space on farms as was used for the 1942 crop. Although the Nation as a whole is in good position to provide storage for a crop as large as that of 1942, it is to be expected that tight storage situations may develop on a local scale in some areas.

A. V. NORDQUIST,
Bureau of Agricultural Economics.

FARM EMPLOYMENT

THIS spring the number of persons working on farms has been smaller than during the planting season in any of the last 18 years for which data are available. This does not necessarily indicate any prospective reduction in agricultural output for the year, however. Generally speaking, weather conditions and a number of other factors can be expected to have more effect upon agricultural production than will scarcity of labor.

Farm labor shortage is one of the rarities in American agricultural history. For that reason, present difficulties in retaining or obtaining competent farm help seem the more acute now. Lack of adequate labor supply is now a major problem, of course. Even so, in many cases worry over cause of lack of labor supply is based less upon inability to find essential labor, than upon comparisons of present labor supply with the supply of the past.

Throughout the years, farmers have been accustomed to an ample or superabundant supply of farm workers. When the first census was taken in 1790, 95 percent of the population lived on farms and in towns and villages of less than 2,500 persons. Families were large, industrial activity was confined to a few centers and community effort was the established custom in producing crops. At the time of the 1940 Census only 43 percent of the people were included in the rural population.

Between the Census of 1790 and that of 1940 we had shifted from a predominately rural nation to one where the majority of the people were city dwellers. One of the inevitable consequences of the change from an agricultural to an industrial nation was a restriction in the abundance of the farm labor supply, relative to need. However, this restriction did not result in serious labor scarcity on farms,

DURING colonial times and on through most of the 19th century, when land was relatively cheap and easy to obtain, farm youth could look forward to owning their own farms within a very few years. As the frontiers faded out, and good farm land became more expensive and difficult to obtain, the path to farm ownership grew long and tedious. As a result, many young farm men began to look around for other fields of work. By then, industrial activity had reached the point where it could absorb many of the energetic and aggressive farm boys. These young farmers, who in earlier days would have stayed on the land, thus found it easier and perhaps more profitable to go to town. During most of the time since 1900, industry has continued to siphon off a considerable part of the excess farm population. The increased use of machinery on farms made it unnecessary to hire as many workers as formerly and minimized the effect of the loss of some workers to industry. During this period the "farm-to-town" movement exceeded that of people away from cities.

After the First World War, this migration of farm workers to towns continued until 1933, when the direction of net migration reversed itself briefly on account of the depression. In that year, rural population, augmented by great numbers of unemployed people from cities, reached the highest level since 1916. When employment opportunities in cities improved after 1933, the tide of migration shifted gradually back to the cities. Nevertheless, the period 1933-40 was one of superabundant labor supply on farms. Generally, any farmer needing help had merely to drive to the nearest crossroads filling station, where he could take his choice of able-bodied and experienced workers. As business picked up in 1940 and 1941, the drain of competent workers from farms to

cities grew apace. After Pearl Harbor, the drain became sharper as farm workers flocked into nonagricultural employment or joined the armed forces.

TOTAL farm employment on the first of each month from January to May of this year has been the lowest of record for the respective month. However, these figures have not been much lower than for the same months in 1942—only 2 or 3 percent less, despite the known losses. Part of the answer to the relatively small decline in total farm employment seems to be that the places of those who have left the farm have been taken to a great extent by women, children, old men, townspeople, and others not normally a part of the labor force. Many of these people are not as competent as were the workers they replace, but in recording the number of people working on farms they count equally with the best type of worker. A farmer who has lost experienced workers and is compelled to replace them with ones of doubtful ability does not feel that his labor needs are being met. Quite understandably, he continues to complain of a labor shortage. Unfortunately, there is little factual information available concerning the change in composition of the farm labor force. However, census data indicate that for the period June–December 1940, about 9 percent of agricultural workers were female and for the comparable period in 1942 about 16 percent of such workers were female.

Reports indicate that farmers are not only working longer hours per day but also more days per week. As the farm employment estimates are based on the number of persons working 2 days or more during the week of inquiry, it is likely that there are a considerable number of people formerly doing only incidental work on farms who would be included as working 2 days or more per week now. Sundays ordinarily have been a day of rest on farms, but there is increasing evidence

that many farmers recently have felt compelled to do field work on Sundays. The inclusion of the Sabbath as a workday increased by about 16 percent the number of man-days of work per week available on these farms.

RELAXATION of Selective Service regulations to permit the retention and placing of necessary agricultural workers on farms has helped greatly to relieve the pressure on the labor supply in some areas.

Importation of agricultural workers from the Bahamas and Jamaica has provided needed hands in truck crop areas of New Jersey, Maryland, Pennsylvania, and Florida. About 8,000 had been brought into the country by the middle of May, most of whom had been placed on farms. It is also planned to bring in about 50,000 workers from Old Mexico. Another source of farm workers in 1943 is the large number of German and Italian prisoners taken in North Africa. Prison camps are being located in agricultural areas where this type of labor can most readily be used. They can be utilized best, of course, on jobs requiring large amounts of hand labor. Arrangements are to be made between individual farmers and the military authorities for the hire of groups of prisoners for farm work. War prisoners receive a wage of 80 cents per day but the farmer pays the Government a certain wage for specified work and also pays transportation for the prisoners from the camp to his farm.

Farm wage rates have risen sharply since Pearl Harbor. The index of farm wage rates for October 1941 was 160 (1910–14=100) and on April 1, 1943, was 244, an increase of 84 points, or about 52 percent. This is indeed a sharp rise but even so the United States average rate per month with board on April 1, this year, was only \$56.84, and the average rate per day without board was \$2.88.

OVER the years, wages paid farm workers have been low compared with industrial rates especially since

the First World War. Further, the industrial worker has employment for longer periods during the year, with the result that his annual average wage income has been about three times that of the hired farm worker. It is estimated that the average wage income for hired farm workers in 1942 was \$588, compared with an average of \$1,790 for factory, railroad, and mining employees.

The index of farm wage rates has risen every quarter (January, April, July, and October) since October 1940. Whether it will continue to do so in July and October 1943 is not apparent at this time. However, wage rates are closely related to farm income and the index of cash income from farm

marketings for 1942 was 188 percent of the 1935-39 average, the highest of record. The index of prices received by farmers for crop and livestock products for April 15 was 185 percent of the August 1909-July 1914 average—the highest since September 1920.

With farmers putting more hours in the field and with the use of farm women and children, deferred selectees, recruits from towns and villages, Japanese evacuees, Mexican, Bahaman, and Jamaican workers, and German and Italian war prisoners, it appears likely that the 1943 crops will be produced without significant losses because of a shortage of workers.

E. M. BROOKS,
Bureau of Agricultural Economics.

ELECTRICITY FOR FOOD PRODUCTION

ELECTRICITY and food production are closely related; in fact, electricity is one of the "hired hands" on thousands of American farms today. To supply the food needs of our fighting men and of our people standing back of them, as well as calls for food from around the world, American farms need to produce more food than ever in our history. Fighting men need and get more food than when they were in their own homes. Thirteen percent of the food we raise this year will go to our soldiers; 12 percent of it will be shipped to allies across the seas. At home, millions of people must be fed, well fed, while other millions are asking for food. If we are to meet these demands, the resources of all of the farms in the country must be used to the limit. The problems involved are many, but chief among them are the loss of manpower on our farms to our fighting forces and the war industries. The next big problem is the shortage of farm equipment. When our war production machine was set up it was assumed that all the strategic ma-

terials available should go into ships and guns and ammunition. But food too is ammunition. This fact is the reason for the easing of WPB restrictions regarding electric service extensions to farmers who are in a position to assist materially in the food production program.

IN THE past months the restrictions put upon the building of electric service extensions to farms for production purposes have been greatly lessened. Prior to issuance of WPB Order P-46-c extensions to farmsteads were practically impossible. This order permitted extensions not to exceed 100 feet per animal unit, and not more than 5,000 feet total length except upon specific authorization of WPB. These extensions now may be made to any farmstead providing the farmer can qualify for service before his USDA County War Board.

Under P-46-c the farmer was required to have 10 animal units. These are set forth in schedule I. Equivalent animal units consisted of:

A. Livestock on hand:	<i>Unit</i>
1 milk cow.....	1
10 beef cattle (all cattle including calves, other than milk cows and cattle in feed lot).....	1
30 breeding ewes.....	1
3 brood sows.....	1
75 laying hens.....	1
40 turkeys or geese.....	1
B. Estimated production of live stock for market:	
20 cattle (in feed lot) per year..	1
160 lambs (in feed lot) per year..	1
30 feeder pigs per year.....	1
250 chickens (not broilers) per year.....	1
600 chickens (broilers) per year..	1

BESIDES having 10 animal units on his farm the farmer must also have one of the following types of electric farm equipment of sufficient capacity for the use contemplated or be able to obtain such equipment without priority assistance:

- Water pump for livestock.
- Milking machine.
- Milk cooler.
- Incubator.
- Brooder.
- Feed grinder.

Many thousands of farms able to produce large quantities of needed foods could not qualify under these circumstances.

After many conferences with WPB by REA and other officials of the Department of Agriculture the animal units were reduced from 10 to 5 by the issuance of supplementary order U-1-c on March 24, 1943. This order also added milk sterilizers to the list of equipment and 125 turkeys or geese per year to the estimated production.

The revision of this order made 10,000 farmers in one state alone eligible for extended REA service.

Under all of these revisions up to May 1, 1943, REA has received 10,314 applications for food production extensions and each day they keep rolling in. The amount of materials made available to the Department of Agri-

culture for utility and REA Cooperative extensions up to June 30, 1943, consists of 750,000 pounds of copper and 3 million pounds of steel.

SUFFICIENT materials have been allocated for the quarter ending September 30, 1943, to provide electric extensions to approximately 30,000 farms.

Farmers had some difficulty getting farmstead wiring materials after their line extensions were approved. To simplify this procedure and eliminate the time element in securing these materials, under date of April 10, 1943, WPB issued order P. 144, which assigns an AA-3 rating to deliveries of farmstead wiring materials to farms that qualify for service under supplementary utilities Order U-1-c as amended. This permits the farmer to qualify for his farmstead wiring at the same time that he qualifies for his line extensions before his USDA County War Board.

The larger farms throughout the country are generally equipped with electric service and they have been more nearly meeting maximum goals. The small farm with the aid of electric power provides a great source for additional food production even with limited farm labor available. Therefore as a new source of food production of all kinds and help in meeting the labor shortage, electric service needs to be as widespread as possible throughout the rural areas of this country. This becomes a vital necessity in view of the world-wide call for food.

A survey was made of 220 farms not getting electric service in one State. That survey indicated that those farms on the 85 miles of line to be built to serve them will be able to produce 3,100 tons more food with power than without. That is the kind of story of increased food production that can be told wherever electric service is made available to farmers.

DIXON MERRITT,
Rural Electrification Administration.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1935-39=100) ²	Cost of living (1935-39=100) ³	1910-14=100					Prices paid, interest and taxes	Farm wage rates
				Whole-sale prices of all commodities ⁴	Prices paid by farmers for commodities used in—					
					Living	Production	Living and production			
1925.....	90	126	125	151	163	147	156	170	176	
1926.....	96	131	126	146	162	146	155	168	179	
1927.....	95	127	124	139	160	144	153	166	179	
1928.....	99	126	123	141	160	148	155	168	179	
1929.....	110	134	122	139	159	147	154	167	180	
1930.....	91	110	119	126	150	141	146	160	167	
1931.....	75	84	109	107	128	123	126	140	130	
1932.....	58	58	98	95	108	109	108	122	96	
1933.....	69	61	92	96	108	108	108	118	85	
1934.....	75	76	96	109	122	123	122	128	95	
1935.....	87	86	98	117	124	127	125	130	103	
1936.....	103	100	99	118	123	125	124	128	111	
1937.....	113	117	105	126	128	130	131	134	126	
1938.....	89	91	101	115	122	125	123	127	125	
1939.....	108	105	99	118	120	122	121	125	123	
1940.....	123	119	100	115	121	124	122	126	126	
1941.....	156	169	105	127	131	131	131	134	154	
1942.....	181	238	116	144	154	149	152	152	201	
1942—May.....	174	225	116	144	153	150	152	152	.....
June.....	176	234	116	144	154	150	152	153	183	
July.....	178	247	117	144	154	150	152	152	202	
August.....	183	251	118	145	155	150	153	152	.....
September.....	187	255	118	145	157	151	154	153	.....
October.....	191	259	119	146	158	151	155	154	220	
November.....	194	273	120	146	160	151	156	153	.....
December.....	197	279	120	147	162	153	158	159	.....
1943—January.....	199	291	121	149	163	155	160	158	223	
February.....	202	286	121	150	165	157	162	160	.....
March.....	202	287	123	151	167	158	163	161	.....
April.....	203	296	124	151	168	161	165	162	239	
May.....	203	.....	125	152	169	162	166	163	.....

Year and month	Index of prices received by farmers (August 1900-July 1914=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	128	144	121	140	155	144	139	84
1928.....	130	152	176	159	151	158	153	149	89
1929.....	120	144	141	149	156	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	62
1932.....	44	47	82	102	63	83	82	65	63
1933.....	62	64	74	105	60	82	75	70	59
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	106	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	144	131	122	122	91
1942.....	119	155	125	199	189	152	151	157	108
1942—May.....	120	159	131	152	189	143	134	152	100
June.....	116	153	148	169	191	141	137	151	99
July.....	115	155	131	200	193	144	145	154	101
August.....	115	151	126	256	200	151	156	183	107
September.....	119	156	129	191	195	156	166	163	107
October.....	117	158	134	226	200	165	173	169	110
November.....	117	160	127	238	197	171	178	169	109
December.....	124	162	151	293	196	175	183	178	114
1943—January.....	134	164	139	277	205	177	185	182	115
February.....	138	163	156	301	214	179	170	178	111
March.....	143	166	172	302	218	180	171	182	113
April.....	146	167	189	291	218	180	173	185	114
May.....	148	167	212	253	214	179	175	187	115

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised March 1943.

³ Bureau of Labor Statistics index with 1925=100, divided by its 1910-14 average of 68.5.

⁴ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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WITH wartime food requirements rapidly increasing both here and abroad, the outlook for this year's agricultural production in the United States is of interest throughout the world. Fortunately, weather conditions in recent weeks have been more favorable than in the spring, and the production outlook is brighter than on June 1. At that time, crop prospects were somewhat less promising than in any of the last 3 years, chiefly because of wet weather in the Central and Northeastern States and dry weather in parts of the Great Plains. Improvement in weather conditions is now allowing farmers to go ahead with their work, although replanting and cultivation have been late in many areas * * *. The 50 million bushels of wheat authorized by Congress on June 14 for sale as feed wheat had been sold by the end of the month, running the total sold by Commodity Credit Corporation for this purpose during the 1942-43 feeding year to 275 million bushels. * * *. To help obtain corn required for industrial purposes, War Food Administration on June 25 announced it was requisitioning corn stocks in 96 midwestern terminal elevators. The supply thus obtained will be allocated among processors of corn.

Commodity Reviews

FEED: Prospects

PROSPECTS for feed grain production are less favorable than at this time last year, because of floods, excessive rainfall, and cool weather, particularly in the Corn Belt. Corn yields will be less than the very high average of last year. The barley supply for the 1943-44 feeding year, including indicated production and the June 1 carry-over, will be 6 percent less than for 1942-43. The oats supply, including carry-over on July 1, will be 10 percent off. Altogether, the 1943-44 feed grain supply, as indicated on June 1, will be about 135 million tons, including wheat and rye available for feed. The indicated total is 12 percent less than the 1942-43 supply, although 12 percent above the 1937-41 average. At the same time, it is expected that the number of grain-consuming animals on farms will be 5 to 10 percent larger next January than last and 28 percent above the 1938-42 average. The feed grain supply in the coming season, therefore, will be smaller in relation to number of animals than in any of the last 5 years. Recognizing the importance of this aspect of the feed outlook, the Department of Agriculture already has called attention of livestock producers to need for conserving feed supplies.

Marketings of corn are light, despite recent action of the Commodity Credit Corporation in calling loans on old corn and that of the 1942 crop. On May 31, when the loans were called, the Corporation had sold nearly all corn obtained in settlement of its loans to producers. To help bring needed corn to market, it called loans on the 50 million bushels of corn from the 1938-41 crop under loan and on the 50 million bushels of 1942 corn under loan. Dead lines for payments were set at June 30 and July 15, respectively. Lightness of marketing re-

flects the tendency of Corn Belt farmers to hold corn for feeding, in response to favorable price ratios. Receipts of corn at primary markets, at around 3½ million bushels weekly, have been inadequate for processors, who need about 20 to 25 million bushels monthly. Commercial stocks from the middle of May to mid-June had been reduced from 31 million bushels to 16 million bushels.

Sales of feed wheat have been large this spring, and indications are that the last 50 million bushels authorized for sale were disposed of during June.

Central market prices for corn and byproduct feeds are holding at the ceilings. Feed mixers and livestock producers are taking all current production of oil meal and cake as it becomes available. Oil-meal production probably will be about 45 percent larger in April-September than in the comparable period last year.

DAIRY PRODUCTION: Outlook

DAIRYMEN, particularly those outside of the Corn Belt, faced protein feed shortages of varying degrees of severity during June, but better than average pasture conditions prevented abnormal reductions in milk production. Pasture conditions during the late spring and early summer were nearly 10 points above the 1932-41 average for the period. Milk production during the late spring and early summer, although still slightly below that for the same period of 1942, was 4 to 5 percent above the 1935-39 average for the period.

Canned milk (condensed and evaporated) and soft cheeses were added to the rationing lists on June 2. An order was issued also requiring manufacturers to set aside 75 percent of their monthly production of both roller and spray process dried skim milk during June and July for Government pur-

chase. These developments restrict civilian consumption of all major dairy products, except fluid milk. Rationing of canned milk is intended to conserve supplies for babies and for adults unable to obtain fresh milk. Civilian consumption of canned milk is expected to be reduced by 40 percent during the second and third quarters of 1943. Although 1943 production of dried skim milk for human consumption may be about 70 percent higher than in 1940, only the most essential civilian, Lend-Lease, and military requirements will be met. Per capita supply of fluid milk and cream for civilian consumption in the third quarter of 1943, however, is expected to be 3 percent higher than in the second quarter.

The 10 percent roll-back in butter prices became effective on June 10, when the Reconstruction Finance Corporation began paying a subsidy of 5 cents a pound at the creamery level for all butter manufactured after June 1.

LIVESTOCK, MEATS: Prices

ROLL-BACK in retail price ceilings of meats, averaging about 3 cents per pound, became effective in late June and early July. The reductions were equivalent to about 2 cents per pound on dressed carcasses and from 95 cents to \$1.30 per hundred pounds of live weight, depending upon species. The necessary reductions in processors' margins, the Office of Price Administration announced, are to be made up by subsidy payments by the Government to slaughterers and are not intended to cause a reduction in prices to livestock producers.

The subsidy went into effect on June 7, with payments to be made by the Defense Supplies Corporation, subsidiary of Reconstruction Finance Corporation. Any establishment that slaughters as much as 4,000 pounds of live weight per month is eligible for the subsidy. To prevent inventory losses resulting from the roll-back, the ceiling prices were reduced as follows: On fresh and frozen meat, prices were

cut at the packer level on June 14, at wholesale on June 19, and at retail on June 21. Reductions on cured and processed pork and beef were required June 28 at the slaughter level and on July 6 at wholesale and retail.

Several recent developments in the wartime livestock and meat program are important. Beginning in May, local slaughterers and butchers are required to make monthly slaughter reports to regional offices of the Food Distribution Administration, and wholesale slaughterers must make weekly reports to the War Meat Board. These reports are essential in enabling accurate day-to-day estimates of the national meat supply.

INSTRUCTIONS have been issued to meat inspectors and graders to assist in enforcing regulations as to pork cutting and trimming, with view to increasing lard yields and reducing the amount of fat left on meat cuts. Limitations also have been placed on the inventories of meat packers, restricting their cold-storage holdings of beef for civilian delivery to one-third their average weekly civilian quota and their stocks of pork to four times the average quota.

An order has been issued to federally inspected packers to set aside 45 percent of their steer and heifer beef that meets Army specifications, for use by the Army. This set-aside amounts to a little less than 30 percent of the federally inspected beef and about 20 percent of total beef produced from all slaughter. As a further step in the meat program, State and area meat-marketing supervisors and County War Meat Committees have been set up to help in the local administration of regulations for livestock and meats.

Cattle and lamb prices declined sharply when the roll-back on retail ceilings of fresh meats went into effect, but recovered later, partly because of a reduction in marketings. Hog prices are now only a little above the support prices, their decline since April

having relieved the squeeze upon slaughterers' processing margins. Slaughter supplies of hogs have gained since April, permitting increased purchases of pork and lard for Lend-lease shipments. Cattle slaughter, smaller than a year earlier, has made it difficult for the armed forces to obtain adequate beef supplies. Indications are, however, that cattle slaughter will pick up later in the year.

POULTRY: Marketings

POULTRY marketings have increased substantially in recent weeks as young chickens reached marketable age and fowls were culled from laying flocks in seasonally large numbers. Farm marketings of poultry will increase until the seasonal peak is reached this fall and in most of the remaining months of 1943 will be larger than the record marketings of the period last year. Laying flocks are larger than a year ago, and the number of young chickens on farms on June 1 was 15 percent larger than on June 1, 1942. Receipts of live poultry at midwestern primary markets in early June were more than double those in early May, although smaller than in the first part of June 1942.

Poultry prices in all markets continue at maximum ceiling levels. Demand is strong, although greater for young chickens, in relation to supplies, than for fowl. Demand for chicks is unprecedentedly large.

War Food Administration has advised poultrymen against further expansion in broiler-raising facilities, but the slaughter goal of 4 billion pounds dressed weight remains unchanged.

Egg production continues larger than last year's at this time, in spite of recent limitation upon the protein content of laying mash and the unfavorable influence of poor weather. Wholesale prices of eggs advanced between 1 and 4 cents per dozen from mid-May to mid-June, and the egg-

feed price ratio has been very favorable. Civilian supplies of shell eggs are expected to decline as production falls off. Supplies of eggs for civilians next fall probably will be considerably short of demand.

FATS, OILS: Production

PRODUCTION of inedible tallow and greases this year is expected to be in the neighborhood of 1,600 million pounds, compared with 1,740 million pounds in 1942. Tallow is derived mostly from cattle, and greases come from hogs and meat scraps.

Factors adversely affecting this year's production include (1) tendency of packers and butchers to leave as much fat on meat cuts as possible and to grind large quantities of fat into sausage, hamburger, and similar products; (2) decreased slaughter in federally inspected plants; (3) shortage of meat scraps for rendering, particularly in eastern areas.

Total disappearance of lard and shortening in the first quarter of 1943 was 9 percent greater than a year earlier. Government purchase of fats, oils, and soap totaled 662 million pounds in the first 5 months of 1943, 60 percent more than in the corresponding period of 1942. The quantity purchased was equivalent to about 14 percent of estimated production of fats and oils from domestic materials during the period.

On June 12, War Food Administration terminated the national marketing quota and revoked the national acreage allotment for peanuts produced in 1943. At the same time, Commodity Credit Corporation was made the sole purchaser of the 1943 crop of farmers' stock peanuts other than those to be used for planting in 1944 or to be processed by growers on the farm where produced and sold directly to consumers.

Cash farm income in 1942 from cottonseed, peanuts, soybeans, and flaxseed totaled 612 million dollars, compared with 413 million dollars in

1941 and 210 million dollars in 1940. Nearly half of the increase over 1940 came from soybeans.

WHEAT: Loan Rates

LOAN rates for the 1943 wheat crop, averaging \$1.23 at the farm, were announced July 1; for No. 2 Hard Winter at Kansas City it is \$1.37 per bushel, compared with \$1.27 in 1942. Loan rates in the various markets were generally about 2 cents higher than the wheat-price equivalent of the flour ceilings, except in the case of the loan on soft red winter wheat, which was 18 cents below the equivalent. When the loan was announced, wheat prices in the various markets ranged from about the same as the new rate to about 5 cents higher.

Wheat prices declined in June. Ordinarily prices decline in May and June in their adjustment to lower levels influenced by the new crop supply prospects. The decline this year was only moderate, reflecting the smallness of the crop in prospect relative to the likely disappearance in 1943-44. In past years in which the loan was in effect, market prices have declined below loan values early in the marketing season, then later rose gradually so that prices in most markets were above loan values.

TRUCK CROPS: Production

WITH growing conditions favorable for the most part, commercial truck crops made good progress in June, although growers in many northern sections had been unable to cultivate crops properly. The harvest for early crops in the South and West is ending. Harvest is active in Virginia, Maryland, and Delaware, where crops have grown rapidly under favorable conditions in June. Rapid progress was made during the month in the North Atlantic and East North Central States, although excessive weed growth may cause some abandonment of root-crop acreage. The season

in the East North Central States may be about 2 weeks later than usual. Growing conditions in the West were mostly good, but fairly cool weather in most areas held back plant growth somewhat.

PRICES: Outlook

FROM here on, Government price controls, commodity rationing, and taxation policies will exert a fuller effect upon retail food prices and consumers' costs of living than has been possible to date. Specific dollar-and-cents ceilings on prices, rationing, subsidies to processors, and wartime policies relating to wages and public fiscal action are designed to create better balance between supplies of goods and services and the amount of consumer purchasing power. Although the general price level may continue to edge upward, the restrictive influences will be strong.

Subsidized roll-back of retail prices on butter, fresh meats, and cured and processed pork products, which already have gone into effect, are expected to be followed with roll-back of prices on coffee and vegetables. Reductions authorized thus far probably will affect about one-fourth of the urban worker's food budget. The intended reduction in retail prices on these items would save consumers more than 2 percent on their food bills and nearly 1 percent on all living costs. Retail food prices have been rising rapidly during the war. Food by itself accounted for about 70 percent of the total increase in urban workers' living cost in the 6 months up to April. Costs for items other than foods has risen less than 3 percent since May 1942, when governmental controls were extended to nearly all nonfood items.

FARM LABOR: Employment

FARM employment increased seasonally into June, with 11,659,000 workers reported employed on farms June 1. There were about 2 percent fewer workers on farms than on June

1, 1942, and 5 percent fewer than the 1937-41 June average of 12,204,000. Wage rates, 37 percent higher than in June 1942, were the highest on record. Average rates, 1910-14=100, stood at an index of 251, compared with 239 on April 1 and with 183 a year earlier.

Nearly all of the decrease in employment from 1942 came from a decline of 6 percent in number of hired workers. Number of hired farm workers on June 1 was estimated at 2,697,000, compared with 2,880,000 a year earlier and with the 1937-41 June average of 2,975,000. Total employment in June was lower than in June last year in all regions except the East South Central and Pacific Coast States. An increase in number of family workers more than offset a decline in number of hired workers in the East South Central States. The number of both family workers and hired workers increased on the Pacific coast.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products
1942			
January	149	146	102
February	145	147	99
March	146	150	97
April	150	151	99
May	152	152	100
June	151	152	99
July	154	152	101
August	163	152	107
September	163	153	107
October	169	154	110
November	169	155	109
December	178	156	114
1943			
January	182	158	115
February	178	160	111
March	182	161	113
April	185	162	114
May	187	163	115
June	190	164	116

¹ Ratio of prices received to prices paid, interest, and taxes.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		June 1942	May 1943	June 1943	Parity price, June 1943
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel)..... cents.	88.4	83.3	95.7	122.8	124	145
Corn (bushel)..... do.	64.2	65.6	81.9	103.4	106	105
Oats (bushel)..... do.	39.9	32.5	46.5	61.2	64.8	65.4
Rice (bushel)..... do.	81.3	72.7	¹ 172.2	179.6	180	133
Cotton (pound)..... do.	12.4	10.04	¹ 17.92	20.09	19.96	20.34
Potatoes (bushel)..... do.	69.7	75.3	¹ 100.9	100.7	188	118.4
Hay (ton)..... dollars.	11.87	8.33	¹ 10.01	12.66	12.20	19.50
Soybeans (bushel)..... do.	2.96	.92	1.63	1.72	1.73	1.57
Peanuts (pound)..... cents.	4.80	3.48	5.51	7.01	7.01	7.87
Peanuts for oil (pound)..... do.	22.35					3.85
Apples (bushel)..... dollars.	.96	.89	1.66	2.40	2.70	1.57
Oranges, on tree, per box..... do.	1.81	1.11	2.05	2.35	2.59	1.88
Hogs (hundredweight)..... do.	7.27	8.38	¹ 13.38	13.90	12.60	11.90
Beef cattle (hundredweight)..... do.	5.42	0.56	¹ 10.68	12.91	12.80	8.89
Veal calves (hundredweight)..... do.	6.75	7.80	¹ 12.31	14.30	14.20	11.10
Lambs (hundredweight)..... do.	5.88	7.79	¹ 11.98	13.83	13.50	9.64
Butterfat (pound)..... cents.	26.3	29.1	37.4	50.6	19.2	² 39.5
Milk, wholesale (100 pound)..... dollars.	1.60	1.81	¹ 23.4	¹ 3.03	³ 3.02	² 2.33
Chickens (pound)..... cents.	11.4	14.9	18.5	24.7	25.1	18.7
Eggs (dozen)..... do.	21.5	21.7	27.4	34.2	35.2	³ 28.9
Wool (pound)..... do.	18.3	23.8	¹ 40.3	41.4	41.3	30.0
Tobacco:						
Maryland, type 32 (pound)..... do.	22.9	17.6	33.0	46.0	57.0	23.8

¹ Revised.

² Comparable base price, Aug. 1909-July 1914.

³ Comparable price.

⁴ Comparable base price, August 1919-July 1929.

⁵ Adjusted for seasonality.

⁶ Preliminary.

⁷ Base price crop years 1919-23.

States in the Pacific coast region had the highest wage rates for farm workers and the sharpest increase over June 1942 rates—a gain of 50 percent. In the same period, rates in New England, Middle Atlantic, and the East North Central States increased about 25 percent, and in the Southern States they averaged increasing 35 percent. Since April, increases have been greatest for wages without board.

Farmers as a whole worked an average of three-fourths of an hour longer per day in June than a year earlier. More women and children were being employed than is usual for the season. Much of the work is somewhat later this year than ordinary.

WOOL: Purchase Program

WOOL growers and growers' pools may now sell shorn wool direct to mills anywhere in the country, as result of an amendment to Food Distribution Order 50, announced June 12 by War Food Administration. The amendment removed the limitation set by the original order, which permitted direct sales to mills located within a 50-mile radius of producers' enterprises. This limitation has been lifted, because it was found to work hardship upon producers dealing with mills at greater distances than 50 miles. The total amount of wool purchased by any manufacturer from producers between April 25 and December 31, 1943, however, cannot exceed the total purchased directly from producers during calendar year 1942.

Under the amendment, all shorn wools produced in 19 Atlantic Coast and Cotton Belt States are exempt from requirements of FDO-50. Shorn wools from these States can be handled exactly as in earlier years and need not be sold to Commodity Credit Corporation. The States thus exempted are the New England States, New Jersey, Delaware, Maryland, Virginia, North and South Carolina,

Georgia, Florida, Tennessee, Alabama, Mississippi, Arkansas, and Louisiana. Their production altogether is less than 2 percent of the country's total clip and is too small to support a specialized wool purchase program. In other States, all domestic shorn and pulled wool that had not been sold by producers by April 25 must be sold to Commodity Credit Corporation. This wool is being bought by dealers and cooperatives, as agents for the Corporation, with growers receiving ceiling prices, less specific charges for handling, transportation, and interest.

Prices for domestic wools at Boston have been unchanged since April 25, when the Government purchase program started.

FRUITS: Prices

PRICES of all fresh fruits are at levels far above those of a year ago. Since mid-May, oranges and grapefruit have continued to sell at ceiling levels, and lemon prices have climbed to ceiling levels. Apple prices during June continued their larger-than-normal seasonal advance, and strawberries in the first part of July were selling at about double the price a year earlier. Plums, cherries, prunes, and apricots, now moving to market in volume, are selling at prices far above those at this time last year.

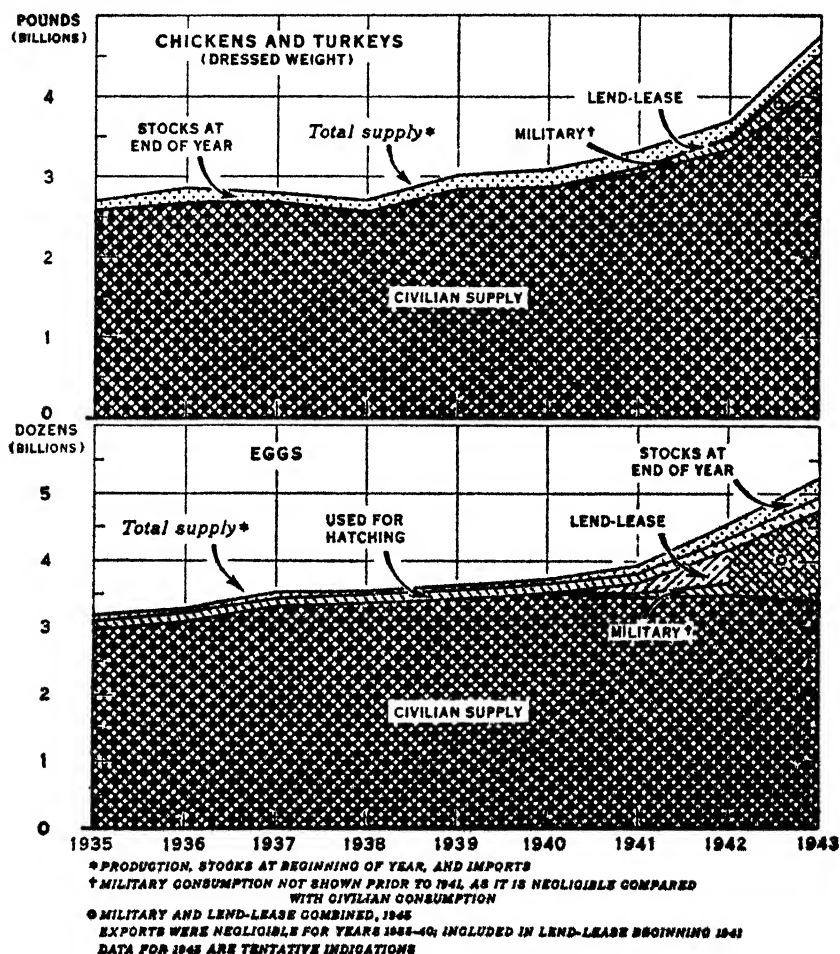
It now appears that combined citrus production from the 1943 bloom, for marketing in the fall of 1943 and in 1944, will be about the same as in the 1942-43 season. Deciduous fruit production this year may be 10 percent below last year's. The peach crop will be about two-thirds the size of the 1942 crop. The crop of apricots, pears, cherries, and apples will be smaller than in 1942. Prune, grape, and fig crops will be larger. On the basis of June 1 indications, it appears that total fruit production in the 1943-44 season will be about 5 percent less than in 1942-43.

INCOME: First Quarter

AGRICULTURAL prices and the demand for farm products are affected, respectively, by two recent important controls—the roll-back of retail food prices and the job-wage-freeze order of April 17. The roll-back, which applies to retail prices of meats and butter, was promulgated along with subsidies to processors of those foods. It will help reduce the pressure on prices that rationing has already helped alleviate. Consumer demand is similarly affected by controls in consumer income.

During the first quarter of 1943 consumer income was at an annual rate of 135 billion dollars, compared with the rate of 127 billion in the preceding quarter and 106 billion in the first quarter of 1942. Income rose 1.7 times as fast during the first quarter of 1943 as it did a year earlier. This large gain in income, even when modified by increased taxes and savings, comes at a time when the physical volume of goods and services is smaller than in 1942.

POULTRY AND EGGS: SUPPLY AND DISPOSITION, 1935-43



THE FOOD CONFERENCE

"TOGETHER, we are fighting a common enemy. Together, also, we are working to build a world in which men shall be free to live out their lives in peace, prosperity, and security." With these words from President Roosevelt as inspiration, the United Nations Conference on Food and Agriculture got under way May 20 at Hot Springs, Va. The Conference was made up of 166 delegates and aides, representing the grand alliance of World War II—the 34 Nations and authorities signatory to the Declaratory of the United Nations and their 12 associate nations.

Three weeks later, after study of the world's food needs and production capabilities, the Conference adopted a document called the Final Act. This instrument set forth a Declaration of Principles by which the Conference believed Nations may hope to realize freedom from want of food. The Declaration emphasized the need for urgent and concerted efforts to economize consumption, to increase supplies and distribute them to the best advantage, if critical food shortage is to be alleviated in the period immediately after the war. For the longer post-war period, it said, "we must equally concert our efforts to win and maintain freedom from fear and freedom from want. The one cannot be achieved without the other." It pointed out that poverty is the "first cause" of hunger and malnutrition, and urged expansion of both agricultural and industrial production, to provide the purchasing power needed to maintain adequate nutrition to all. The recommendations were offered with the injunction that the present is the best time to prepare for solving the problems of post-war.

THE second part of the document was devoted to two recommendations: (1) That Governments represented should make a formal agreement upon their obligation to collab-

orate in raising levels of nutrition and standards of living of their peoples and agree to report to one another on the progress achieved; and (2) that the Governments establish a permanent organization in the field of food and agriculture.

Resolutions of the Conference called for creation of an Interim Commission to begin carrying out of these recommendations. It was suggested that the Commission meet in Washington by July 15, 1943, to formulate and recommend a specific plan for a permanent international organization in the field of food and agriculture. This Commission also will prepare an intergovernmental declaration setting forth mutual obligations to raise standards of living and levels of nutrition, to improve agricultural production and distribution, and to cooperate with other nations by means of the permanent organization and periodic reports.

THE body of the Final Act was made up of resolutions and recommendations touching each of the 31 subjects in the Conference's agenda. Eleven working committees discussed and explored these subjects throughout the sessions. From these deliberations came reports, accompanied by the resolutions and recommendations appearing in the final Act. These documents were issued in three series, corresponding to the first three of the technical sections of the Conference. Section I issued a report and recommendations on "Consumption Levels and Requirements." Section II was responsible for "Expansion of Production and Adaptation to Consumption Needs." Section III reported on "Facilitation and Improvement of Distribution." Section IV prepared the Conference's declaration and the plan for the Interim Commission.

Throughout the Conference, great emphasis was put upon the necessity for future international organization

and collaboration in bringing world production and consumption into balance. The consumer's problems were given sharp attention. Need for adequate nutrition of all peoples and of adjustments to make such nutrition possible was stressed. Conservation and other modern methods of efficient agriculture were urged. And there was agreement that distribution will be improved only as conditions of international security are established that will make possible an expanding and balanced world economy.

Although the Final Act represents the Conference's major conclusions, the sessions aided in many ways to clarify international understanding on the world's food problems. The delegations from day to day issued declarations of their own upon food problems. These statements presented in more or less finished form the chief points promulgated in the Final Act. Of more than usual interest were the statements of the British, Russian, and United States delegations. The first of these stressed the importance of nutrition in considering the need for increased consumer purchasing power. The Russians asked help in feeding the Red Army and in agricultural reconstruction after the war—topics not formally on the agenda, though much in the air. The delegation of the United States set forth the necessity for a continuing food and agricultural organization.

THE suggestions of the Conference underlined the fact that its aims were neither entirely economic nor political. Primarily, it was a meeting of experts in agriculture. At the same time, there was latent a realization that the Conference was closely connected with the United Nations' diplomatic strategy, both in respect to post-war objectives and to the development of war aims. This implied purpose was given explicit pronouncement on several occasions. President Roosevelt thus stated it in his letter to the opening session and in his talk to the dele-

gates, assembled in Washington after the Conference had closed. Judge Marvin Jones, who presided over the general sessions, also spoke of this second purpose. These attitudes were crystallized in the Final Act's Declaration. At the same time, the economic objective was outlined in the Summation, prepared by the Conference as a running account of its work.

Bitter experience with a world in chaos helped to guide the minds of the delegates into constructive channels of post-war thought. Some of this experience was economic—drawn from years of agricultural depression and the paradox of poverty amidst plenty. One of the notable results of the meeting was the British "buffer stock" proposal, which in the United States suggested comparison with the ever-normal granary. The substance of the "buffer stock" idea was that surpluses would be stored in fat years for distribution in lean years; but that they would be administered from the standpoint of consumption rather than price stabilization. Other precedents were taken from wartime rationing experience. On the other hand, precedents of organization existed in the field of international agriculture. The work of the International Institute of Agriculture and the League of Nations were studied and to some extent followed in the preparation of recommendations.

TWO major problems were surmounted in the Conference. The first problem was to establish the Conference's scope. The view that recommendations should be made on post-war food and agricultural relief policies was especially strong with the delegations of Nations devastated by war or needing considerable development and tools to become major food producers. As the discussions evolved, however, the relief problem was set outside the direct jurisdiction of the Conference. A question arose also over the relative post-war importance of larger economic questions of tariffs, trade, finance, and so on. It was

agreed that this larger aspect was germane to the immediate subjects of food and agriculture, and accordingly it finds statement in the Final Act.

Among the specific American contributions were statements by Paul H. Appleby, Under Secretary of Agriculture and acting chairman of the United States delegation; Dean Acheson, Assistant Secretary of State; and Thomas Parran, Surgeon General of the United States Public Health Service. The first two helped clarify the aims of the Conference, endorsed the broader economic view, and spoke in favor of international cooperation to stimulate production and increase buying power so that maximum food supplies could be fairly distributed among the peoples of the world. Mr. Parran contributed to the emphasis on better nutrition.

"If everybody could have a good income," he said, "then by education you ought to be able to see that everybody is well fed." He added that adequate protective foods in the normal diet would extend the active, virile productive span of human life by 10 years.

ON June 8 President Roosevelt addressed the assembled delegates

in Washington. He reviewed the work of the Conference and praised the delegates' unity of effort. He pledged that the preliminary action requested of the United States Government, in connection with establishing the Interim Commission, would be forthcoming and endorsed the Conference's emphasis on the future consideration of food and agricultural problems in their relation to international economic problems. Finally, describing the ultimate objective of the Conference, he said:

"It is to build for ourselves, meaning all men everywhere, a world in which each individual human being shall live his life in peace; to work productively, earning at least enough for his actual needs and those of his family; to associate with the friends of his choice; to think and worship freely; and to die secure in the knowledge that his children, and their children, shall have the same opportunities.

"That objective * * * will not be easy to achieve. But you and I know also that, throughout history, there has been no more worth-while, no more inspiring, challenge."

SIERT RIEPMA,

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FOOD OUTLOOK

WEATHER conditions in many sections of the country were improved in the latter part of June, and crop prospects are now more favorable than they appeared in the June crop report. On the basis of June crop conditions, the present and prospective livestock production, and available stocks, the food outlook for the remainder of the year can be seen more clearly than before.

Through rationing and Government set-aside orders, stocks of many food commodities have been built up during the season of high production. Also, consumption of rationed foods is likely to be maintained at the present level for the rest of the year. Livestock production has greatly increased dur-

ing recent months, and for the year as a whole will probably exceed the record production in 1942. Federally inspected slaughter of sheep, lambs, and hogs was of record size for the month of May; and in spite of a large Government set-aside order for steer and heifer beef, supplies of meats for civilians should become more plentiful than they have been in the past few months. Stocks of manufactured dairy products on hand appear to be sufficient to maintain the present level of consumption until the next season of high production. For the year as a whole, however, per capita consumption of most dairy products, except fluid milk, will be below last year.

Supplies of poultry for consumers

will continue to increase until the seasonal peak is reached late this fall and in most of the remainder of 1943 will exceed the record quantities of a year earlier. Supplies of shell eggs for civilians this summer and fall probably will be as large as a year earlier though seasonally smaller than the supply of recent months. Stocks of food fats and oils, both at the retail and wholesale level, appear adequate to meet the demand under rationing in practically all areas.

THE citrus fruit crop harvested this season was of record size, but early frosts and generally bad weather are likely to reduce production of deciduous fruits to about 90 percent of last year. Most of this reduction will occur in areas producing for the fresh market. The total supply of canned fruit and fruit juices in the 1943-44 season probably will be no more than three-fourths of that last season. However, dried fruit production is likely to exceed that of 1942. Largely as a result of bad weather, the supply of commercial vegetables for the fresh market so far this season has been about 13 percent

smaller than at this point in 1942. Growers have indicated intentions to plant a larger acreage of major processing truck crops in 1943 than in 1942. However, frequent rains have prevented many from planting crops at the usual times, and the delay is likely to reduce yields. Supplies of potatoes during the next few weeks are expected to be relatively large.

The June condition of the wheat crop indicates a probable output of 731 million bushels, compared with 981 million bushels in 1942. But with favorable weather in the next 2 months, the total crop may be larger than now indicated. The supply of rye for the 1943-44 year is expected to be the largest since 1922.

Prospects for feed crops on June 1 were not as favorable as on that date in 1942. With average growing conditions in the rest of the season, the 1943-44 supply of feed grains (including wheat and rye available for feed) probably will be 11 percent smaller than the 1942-43 supply, but 31 percent larger than the 1935-39 average.

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LIVESTOCK TRANSPORTATION

WITH shortages of tires, gasoline, and motortrucks reducing the volume of motor transportation of livestock, a renewed dependence upon rail transportation is being felt by livestock producers in many areas.

Before the war, transportation of livestock for years had been shifting rapidly from rail to motortruck. By 1941, more than two-thirds of the cattle, calves, and hogs, and more than one-third of the sheep and lambs received at over 60 important public stockyards in the country came by truck. To many of these markets trucks delivered nearly all of the livestock. Receipts of livestock at most of the local markets of various types were predominately by truck.

Under wartime conditions, however,

something of a reverse swing is under way. Motortrucks are continually wearing out and few new ones have been available for replacements. Use of trucks is restricted by difficulty in getting repair parts, need for conserving tires and gasoline, the shortage of operators and mechanics, and the reduced speed at which motor vehicles are permitted to operate. Programs for truck conservation have been put into effect in many sections, some by truck operators themselves and others by the Office of Defense Transportation, County War Boards and livestock industry transportation committees. As result, trucks transporting livestock are being operated more efficiently, mileage in assembling livestock has been reduced, and an in-

creasing proportion of trucks go to market with full loads. At the same time, some shift to rail transportation has been made, and more can be expected.

UNDER the circumstances, this type of change should be encouraged, particularly as it applies to livestock moving longer distances, if the railroads are in position to handle an increased volume. In order to throw light on this subject, the Bureau of Agricultural Economics has made a study to determine what facilities are available for handling livestock at country shipping points in the Corn Belt region.¹ Although no information was assembled for the rest of the country, it may be assumed that the situation there will have many points in common with that in the Corn Belt.

Railroads in the Corn Belt have enough stockyards and other facilities at local shipping points to handle a materially increased volume of livestock, except in certain areas in States along the eastern part of the region and in a few other places. In the 14 States comprising the 12 North Central States and Kentucky and Oklahoma, 72 percent of towns on railroads have stockyards. Stockyards are much more common in States along the western border than elsewhere. In North Dakota and Kansas, more than 9 out of 10 towns have stockyards. In Michigan, Ohio, and Kentucky, on the other hand, stockyards are available in less than half the towns. Towns in areas adjacent to important markets are more generally without stockyards than those located farther away. However, stockyards are maintained in some of these, but are used largely for unloading cattle and lambs shipped in for feeding. Stockyards are more commonly missing in towns on branch lines with poor railroad service than in those located on main lines with good service.

¹ Railroad Facilities for Handling Livestock at Shipping Points in the Corn Belt Region, Bureau of Agricultural Economics, U. S. Department of Agriculture, May 1943.

LOCAL rail stockyards in some areas apparently need repairs if they are to be used more extensively. Many of those that are poorly drained, and some of those located on unimproved dirt roads, are not satisfactory for use in wet weather. Some of the stockyards on branch lines that have poor railroad service probably will not be used to any great extent.

For the region as a whole, three-fourths of the towns having stockyards are located less than 10 miles from other towns with stockyards on the same line. Only 8 percent of the towns are 15 miles or more from other stockyards on the same line. Many towns have no stockyards, chiefly because old yards have been abandoned. The pre-war shift of transportation to trucks left these yards unused. Some were dismantled and moved elsewhere. Many others are in poor repair, but can be put in usable form by the railroads at small expense.

The number of stockyard pens at country shipping points varies. For the region as a whole, 13 percent of the stockyards have only 1 pen and 27 percent have 2 pens each. Nearly three-fourths of the stockyards have 4 pens or less, and only 4 percent have more than 10 pens. In areas where abandonment of yards has been considerable, the small yards usually are the ones that have disappeared.

ALL railroad stockyards have single-deck loading chutes, but only 41 percent of those in the region are equipped to load double-deck cars. Double-deck loading chutes generally are available at concentration yards, at assembly points used by local cooperative shipping associations and dealers, and at yards used for unloading lambs brought in for feeding. Some railroads provide loading chutes at a few local stations or on railroad sidings, without providing stockyards.

Livestock scales have been removed at many existing stockyards. In some cases where scales are available they are maintained by local cooperative

associations, dealers, or other regular shippers, instead of by the railroads. Where livestock scales are not available at local stockyards, the animals can generally be weighed on other local scales if weighing is necessary before shipment. Water facilities are available at 80 percent or more of the stockyards in Iowa, Minnesota, Ohio, and North Dakota, but are provided at less than half of the yards in Oklahoma. Where water is available it is provided free by the railroads to those who use the yards.

When livestock is marketed it is largely moved from farms by truck. If shipped by rail, it moves from the farm to the local shipping point by truck. If shipped by truck, it is usually moved all the way from the farm to final destination without being transferred. If the distance to market is relatively short, say less than 75 or

100 miles, much inconvenience and in many cases additional expense can be avoided if the livestock loaded at the farm can be moved uninterruptedly to final destination by motortruck.

The extent to which the transportation of livestock can be shifted from truck to rail without taxing existing assembly and loading facilities at railroad shipping points will need to be carefully watched. The situation next fall may become critical. If repairs are needed to make existing yards usable, or if more yards are needed, steps should be taken to provide them. The problem must be appraised by areas because there is wide difference with respect to both the use made of rail transportation, and the extent to which stockyards have been abandoned.

KNUTE BJORKA,

Bureau of Agricultural Economics

WHEAT OUTLOOK

THE wheat situation now is strikingly different from last year, when supplies were overtaking storage facilities. Last fall all regular storage space was filled, and vacant garages and even schoolhouses were used to shelter the large grain supplies. Stocks of wheat had been accumulating under the ever-normal-granary program, but were given a big boost by a large crop in 1942, the result of favorable growing weather. Wheat supplies (carry-over plus crop) at 1.6 billion bushels was the largest in our history. Disappearance during the year ending June 30, 1943, however, also has turned out to be the largest on record—so large in fact that it used all of the big crop and reduced the carry-over from 632 million bushels on July 1, 1942, to 600 million bushels this July. The carry-over in the period 1933-42 averaged 270 million bushels. The 1942-43 disappearance, totaling 1 billion bushels, amounted to one-fourth of the usual disappearance for the world, excluding the U. S. S. R. and China. The large disap-

pearance was the result of unusually large quantities being fed to livestock, which, together with quantities used for alcohol and seed, raised total nonfood uses of wheat to more than 85 percent as much as was used for food. All of the 275 million bushels of wheat for feed authorized by Congress was sold by the Commodity Credit Corporation. The last 50 million bushels were authorized on June 14.

WITH a carry-over on July 1 indicated at 600 million bushels and a crop estimated at 791 million bushels, supplies for 1943-44, excluding imports, will approximate 1,390 million bushels. Disappearance is expected to be even larger than in 1942-43. Analysis of the prospective feed-grain-supply and livestock-requirement situation indicates that very large quantities of wheat for feed could be utilized to advantage. It is expected that imports of wheat for feed will supplement domestic supplies, but these will undoubtedly continue to be limited by shipping space. With the continued need of large quantities

of wheat for alcohol and allowing for some further increase in food use and for exports, total disappearance in 1943-44 may be about 1.1 billion bushels. Such a disappearance would bring the carry-over on July 1, 1944, down to about 250 million bushels—adequate to cover working stocks of 125 million bushels, 75 million bushels as a reserve against poor crop yields, and a 50-million-bushel commitment under the International Wheat Agreement for post-war relief.

Indications now are that domestic wheat supplies will dwindle down to what might be considered a minimum reserve by July, 1944. Because of this prospect, a question naturally rises as to prospects for the following year, when the country will not have large reserves to fall back on. The answer lies in increased production in 1944. Foreseeing the situation ahead, the War Food Administration in July urged that the acreage be stepped up to about 68 million acres of wheat, which represents an increase of 26 percent, compared with the 54.2 million acres seeded for harvest in 1943, but about the same as the 1932-41 average of 68.9 million acres.

ALTHOUGH 68 million acres is about 16 percent less than 81 million acres seeded for harvest in 1937, this seems a reasonable goal in view of the need for other crops. It was pointed out in the announcement by the administration that, generally speaking, wheat should be planted wherever it can be grown without undue hazard and wherever it will produce more nutrients per acre in relation to labor and machinery requirements than other crops. It was further pointed out that it will be extremely important to guard against overexpansion in hazardous areas and against breaking native sod or plowing land that has been restored recently to grass cover.

From the above it is apparent that the United States will not have an excess of wheat to supply other coun-

tries, beyond moderate lend-lease requirements and regular exports, and its commitments under The International Wheat Agreement. However, supplies in Canada are adequate to meet very large overseas requirements. With a record carry-over there, plus the surplus from the new crop, Canada will have supplies of about 800 million bushels for export in 1943-44. This would be more than enough to take care of any likely requirements. In addition, exportable surpluses in both Argentina and Australia are of record size and will be available as soon as the shipping situation is eased.

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Bureau of Agricultural Economics.

PEANUT STOCKS

FARMERS' stock peanuts milled in the 1942-43 season up to June 1 totaled 1,458,839,000 pounds, compared with 905,293,000 pounds to the comparable date in 1942. Farmers' stock peanuts, cleaned and shelled, amounted to 1,154,718,000 pounds, compared with 759,076,000 pounds up to June 1 last year. The total of 304,121,000 pounds crushed through May 31 was more than double the 146,217,000 pounds total for the period in 1942. Farmers' stock peanuts at mills and in warehouses totaled 279,016,000 pounds, compared with holdings of 390,701,000 pounds a month earlier and 195,408,000 pounds on May 31, 1942.

Indicated disappearance of edible grade shelled goods during October 1942 through May 1943 totaled 572,908,000 pounds, compared with 395,383,000 pounds for the comparable period a year earlier. Stocks of these goods declined from a total of 149,820,000 pounds in April to 135,117,000 pounds on May 31 but were 20 percent higher than on the comparable date of 1942. Indicated disappearance of cleaned peanuts (in the shell) from October 1942 through May 1943 was nearly 5 percent lower than for the like period of 1941-42.

EGG MARKETS FOR THE SOUTH

EGG production has increased steadily in the United States in the past 2 years in response to wartime demands. This increase has occurred not only in areas normally producing eggs on a commercial scale, but also in virtually every area of marginal and submarginal poultry and egg production. This is true because the Nation has needed all the eggs it could get, in addition to those from the established producing areas. The eggs that Farmer Jones produced on his farm in Georgia helped to fill the Nation's egg basket just as much as those produced by Farmer Brown in the heart of the Corn Belt.

The big problem involved in this new situation, of course, was to get Farmer Jones' eggs to market so they could become a part of the Nation's egg basket. Areas of marginal and submarginal egg production offered little in the way of well-established market outlets for eggs. In many of these areas, eggs were equivalent to "cash money" and were exchanged by farmers for "store" food, clothes, and other necessities. These barter markets could absorb a fair amount of eggs, but were not equipped to handle large quantities in the period of heavy production. At best, the storage facilities were inadequate and these markets had practically no means of grading eggs. Of great importance to the producer also was the fact that they afforded little means of avoiding wide fluctuations in prices. In brief, lack of facilities in these areas for handling eggs in great volume was bound to discourage expansion of war-essential egg production. These conditions were especially acute in the South.

In February 1942, therefore, the Southern Egg Marketing Program was launched to help solve the egg marketing problem in the South's areas of marginal and submarginal egg production.

IN a sense, it was a large governmental purchase program for southern-produced eggs. Price supports for eggs—a floor under the egg market—had been announced for the entire Nation. What the Southern Egg Marketing Program provided was a medium by which this support could be brought to egg producers in the South. It was a voluntary program, available to any of the 12 Southeastern States desiring to use it.

This program contained provisions for purchase of eggs at established prices, in keeping with price support levels for the Nation; purchase of eggs in lots of 10 cases or more at buying stations operated by agents under contract to the Food Distribution Administration; candling and grading by Federal-State graders of all shell eggs purchased. It also provided opportunity for Southern farmers, co-operatives, dealers, and others to market their eggs throughout the season of heaviest production.

Immediate aim of the program was to encourage production of eggs in the areas of small production and to provide a market for the eggs. It also demonstrated to farmers and businessmen of the South the advantages of well-established local markets that could operate at price levels in keeping with those at large terminal egg markets throughout the country. In this respect the program had important implications for the post-war future of southern egg production. After the war, the existence of well-established markets will be even more necessary than now, if egg and poultry production is to be more than a casual activity, incidental to other agriculture.

DURING the first year of the program, 7 Southern States—Virginia, West Virginia, North Carolina, South Carolina, Georgia, Louisiana, and Florida—took part. First operations began in March in North Carolina, extended to the 6 other States shortly

thereafter and continued in the flush production through June 30.

During 1942, as part of this program, agents of the Food Distribution Administration—then the Agricultural Marketing Administration—purchased more than 29,000 cases of shell eggs valued at more than \$255,000. For these eggs farmers received prices established at not less than 85 percent of parity, which was the price support level for egg production throughout the Nation.

From the start, egg producers who maintained small farm flocks of layers were provided a cash market for eggs in relatively small lots. Also, more than 23 buying stations set up under the 1942 program in these 7 States. In many instances, these were the first established markets for eggs the areas had ever had.

The 1943 program follows the same general line as that in 1942, but its scope is broader. The program for 1943 is being carried on in 12 Southern States: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Virginia, and West Virginia. Also, it emphasizes much more heavily the utilization in the South of eggs produced in the South. In addition to its 1942 features, the 1943 program is designed to encourage agents of the Department to sell eggs to Army camps, to war industry plants, or to other local outlets. Meantime the Food Distribution Administration stands ready to buy the eggs purchased by its agents. The prices paid to agents by the Food Distribution Administration are the announced prices, plus 4 cents a dozen to cover costs of handling, grading, inspecting, packing, and storing.

The agent's part is to buy shell eggs from producers, cooperatives, dealers, or other vendors, in lots as small as 1 dozen. These agents pay the producers not less than the established prices applicable to each grade, and assemble the purchased eggs in 10-case lots, if the eggs are to be delivered to the FDA.

SUPPORT prices announced under the 1943 program are based upon the commitments of the Department to support the market at a United States average farm price, for all marketable grades and sizes, of 30 cents a dozen in the spring and early summer months and a United States average of 34 cents a dozen for the year.

The program is set up to function during the months of heaviest production and for as long in 1943 as it was needed. Operations for all States participating are conducted through regional offices at Atlanta, Ga., Dallas, Tex., and New York City.

Thus far in 1943, through this program the FDA has accepted delivery of more than 16,000 cases of shell eggs valued at more than \$158,000. The quantity of eggs delivered to the FDA, however, represents only a portion of that handled by FDA agents.

The buying stations operated by the agents not only have provided an outlet for eggs produced in many areas of the South, but also have prevented local gluts during the period of large production. Further, the agencies have sold many cases of eggs for use locally and in Army camps and factories producing materials for war.

Through this program, the Nation has been enabled to obtain maximum benefit from the egg production expansion in the South. This activity has helped to give the southern producer a price for his eggs in keeping with prices at terminal markets, and has brought him "cash money" based upon the quality of eggs he has had to sell.

GEORGE F. SNELL,

Food Distribution Administration.

Cash income from farm marketings rose from 240 percent of the 1935-39 average in February to 260 in March, on basis of seasonally adjusted index numbers. If the income level of the first quarter maintained though the year, farmers would realize around 3 billion dollars more income from marketings than the record of 15.4 billions received last year.

PIG CROP PROSPECTS

THE 1943 spring pig crop will be about 74,000,000 head, the Department of Agriculture estimated in June. This is about 13,000,000 head, or 22 percent larger than last year's spring crop. A fall pig crop of about 53,000,000 head is indicated. This is about 9,000,000 head, or 21 percent, above the 1942 fall pig crop. The estimated spring and fall pig crops combined total about 127,000,000 head, compared with about 105,000,000 head in 1942 and a 10-year average of 73,148,000. The estimated number of hogs over 6 months old on June 1 this year is greatly above the number in any other year and is 26 percent higher than the June 1, 1942, estimate.

The number of pigs saved in the spring of 1943 is estimated at 74,050,000 head. This number is 22 percent larger than the 1942 spring crop, which was 15 percent above the previous record crop of 1931. The pig crop is larger than last year in all regions and in all States. The largest relative increases occurred in regions outside the Corn Belt. There was a 20-percent increase in the North Central States, a 12-percent gain in the East North Central, and a 25-percent gain in the West North Central. Increases in other geographic divisions are: In North Atlantic, 35 percent; South Atlantic, 23 percent; South Central, 28 percent; and Western, 24 percent.

In the spring season of 1943, 12,140,000 sows farrowed, an increase of 26 percent over 1942. This number is but little different from that indicated in the December 1942 Pig Crop Report, based on farmers' reports on breeding intentions for the spring of 1943. The average number of pigs saved per litter this spring is 6.10 compared with 6.31 in 1942 and a 10-year average of 6.05. Averages per litter were off in most of the important hog-producing States, but the largest drop was in the Eastern Corn Belt, where weather early in the farrowing season was quite unfavorable.

For these 5 States as a whole the average dropped from 6.64 in 1942 to 6.19 this year.

Monthly distribution of farrowings showed larger percentages of sows farrowed in April and May this year than last. The May percentage was the largest for all years since 1935 and second largest in 14 years for both the United States and the Corn Belt.

NUMBER of sows expected to farrow in the fall season of 1943 is 8,516,000, an increase of 1,691,000 sows, or 25 percent, over the number farrowed last fall. Compared with the 10-year (1932-41) average, this number is up about 88 percent. As with spring farrowings, the largest relative increases are in the regions outside the Corn Belt. By divisions of States, the expected increases over last year are: North Atlantic, 55 percent; East North Central, 24 percent; West North Central, 21 percent; all North Central, 23 percent; South Atlantic, 29 percent; South Central and Western, 24 percent. In interpreting breeding intentions this year, it was assumed that the relationship between intentions and subsequent farrowings would be fairly similar to other years of high hog prices and fairly high hog-corn ratios. No allowance was made for any action which the War Food Administration may take to induce farmers to hold down their fall farrowings, nor to the fact that corn supplies relative to the number of hogs to be fed are not as abundant as would ordinarily be indicated by the current hog-corn ratio as calculated from current market prices for corn and hogs.

If the indicated number of sows is farrowed this fall, and the number of pigs saved per litter is equal to the 10-year (1932-41) average, the number of fall pigs this year would be about 53,000,000. This number added to the estimated 74,000,000

spring pigs saved this year would give a total yearly pig crop of 127,000,000. This would be 22,000,000 more pigs than were saved in 1942 and 54,000,000 more than the 10-year average. Number of hogs over 6 months old on farms is estimated at 36,257,000 head, about 26 percent larger than at this time

last year, and much the largest total ever on farms at this date. For the North Central States, the estimated number is about 23,000,000 head, an increase of over 5,000,000 head, or 29 percent.

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CHANGES IN SIZE OF FARMS

THE amount of land in farms in this country has increased consistently as far back as records go. Since 1850, for example, it has grown from a total of 300 million acres (16 percent of the total land area), up to 1,061 million acres in 1940 (56 percent of the land area). The number of farms, as classified by the Federal Census, increased from 1½ million in 1850 to above 6 million in 1910. In the period since 1910 farm numbers have been fluctuating between 6 and 7 million, approaching 7 million in 1935 and dropping to almost 6 million in recent years. Meantime, changes in number of farms and in the acreage in farms have reduced the average size. Thus the average size of farm in 1850, which was 203 acres, declined to 138 acres in 1910, then swung upward to 174 acres in 1940. Between 1935 and 1940, a 10.5 percent decline in number of farms and an 0.6 percent increase in the land in farms resulted in a gain of 19.2 acres for the average size farm.

UNDER current war conditions, when there is great need for maximizing not only the total production, but also the production per farm operator, this trend toward a larger average-size farm is in the right direction. That is not to say, however, that the changes in size that have been occurring are all desirable ones, or that they have necessarily brought better distribution of the Nation's land resources among the 6 million farm operators. Two opposite movements have been under way—an upward trend in the

number of very small farms, and a trend toward an increased number of very large farms. These two trends have resulted in a decrease in the number of farms ranging around the average size. Between 1930 and 1940 the number of farms of 3 to 19 acres increased by 155,000 (49 percent), whereas farms of 20 to 259 acres decreased by 371,000 (8 percent). At the same time the number of farms of 260 acres and over in size increased 31,000 (4.5 percent). The small farms during this 10-year period, those between 3 and 19 acres in size, gained 587,000 acres (6 percent), middle-sized farms, those of 20 to 259 acres lost 20,409,000 acres (5 percent), and the larger farms gained 93,913,000 acres (17 percent).

These trends, revealed by census data, must be appraised with an eye to certain characteristics of census data. In the Western States where the most pronounced increase occurred in large farms, a large amount of land formerly grazed as open range land and therefore not included in the acreage of farms, in 1940 for the first time was included as farm acreage because leased by farm operators under the Taylor Grazing Administration's programs. In the Southern States, where a substantial increase also occurred in the average size of farms, the shift away from tenant and cropper labor to hired labor by plantations resulted in the enumeration of these plantations by the census as fewer farm units. If proper allowance is made for these changes, however, there is still seen

a net increase in the size of farms for the country as a whole in the last decade.

THE net change in number and size of farms from 1930 to 1940, is considered to indicate more accurately the direction of current trends than the data for 1935 and 1940. The number of farms enumerated in 1935 was 524,000 more than in 1930, whereas the number enumerated in 1940 represents a decrease of 716,000 from the 1935 figure. Between 1930 and 1935 the number of farms increased in every size group classified, except in those under 3 acres and between 20 and 49 acres. From 1935 to 1940, the number of farms in every size group from 3 to 700 acres decreased. The farms under 700 acres declined by 729,000 or 11 percent, but the number of farms of more than 700 acres increased by 14,000 or 9 percent. Farms of less than 700 acres contained in aggregate 49,495,000 acres less in 1940 than in 1935, whereas farms of 700 acres and over contained in total some 55,832,000 acres more land than in 1935. The farms of 700 acres and over made up 2.2 percent of the total number of all farms in 1935, and 2.6 percent of the total in 1940. These large farms included 34.2 percent of all farm acreage in 1935 and 14.8 percent of the crop land. In 1940 they included 39.2 percent of all farm land and 18.5 percent of the crop land.

Recent trends in the size of farms have differed between the major tenure groups. Although the average size of all farms increased 11 percent between 1930 and 1940, the average size of full-owner farms decreased by 3 percent, and that of farms in other tenure groups increased. Part-owner farms expanded on the average from 374 to 488 acres (30 percent), manager farms grew from an average of 1,109 to 1,830 acres (65 percent), and the average size of tenant farms increased from 115 acres to 132 acres (15 percent). Among the tenant group, the share and share-cash tenant farms have experienced the greatest growth in

average size. The average size of cropper units increased slightly and cash tenant farms remained stable. The decline in the average size of full-owner farms was not consistent throughout the 10-year period up to 1940. From a low of 122 acres per farm in 1935, the average size of full-owner farms increased to 124 acres in 1940. Recent indications are that this 1935-40 trend has continued since 1940.

SINCE the 1940 Census, farm operating units have been undergoing considerable change because of the tremendous impacts of the war. It is probable, therefore, that some of the changes indicated by the latest census data have shifted intensity and direction to some extent. Marked shift of farm acreage into large farms undoubtedly has slowed down, and the decline in number and acreage of medium-sized farms probably has been reversed. At the beginning of the war the drain of manpower away from farms meant that the remaining operators had to take over vacated tenant tracts and small farms formerly operated by owners. The large operators depending upon hired laborers were already cramped because of the loss of help. Rather generally, the well-equipped family farm operators, who were not so dependent upon hired labor as the large operator, have taken up these vacated lands. This sort of development has been occurring right along in the Corn Belt and general farming areas.

There have been few indications of major shifts in the size of farms in the range area during the war period. Farms in this area probably have remained fairly stable as far as acreage is concerned. In the plantation area of the South there are indications that the shift of sharecroppers to wage hand status, which was taking place rapidly during the 1930's, has been reversed by wartime necessities. Plantation owners in many instances have given cropper status to many of their labor-

ers, in order to discourage them from leaving the farm for other employment. The reestablishment of cropper units on southern plantations will tend to decrease the average size of farms as classified by the census.

BEGINNING with the current crop year, war manpower policies as to agriculture have influenced the size of farm operating units considerably. The drain of manpower from farms has been halted. Also, many reports indicate that a considerable migration back to the farms has occurred recently. Significant numbers of persons formerly employed in nonessential industries have gone into farming. Many farm operators and laborers, who at the beginning of the war left the farms for higher paying jobs, are returning to agriculture. This appears to be true primarily for those who went into war construction jobs that are now completed. Those returning to farms as operators for the most part have taken up farms that have been abandoned, or parts of larger farms, thus increasing the number of relatively small farms.

Another factor tending to decrease

the average size of farm units which also is related to the war manpower situation is the division of farms between father and son. Many fathers are taking advantage of war-created opportunities to set up their sons as independent operators on farms of their own. To some extent new land has been purchased, but in many instances the home places have been divided.

Recent investigations in several counties in the Northern Great Plains States show that the average size of farms of all tenure groups in that area has increased, that the size of owner-operated farms has increased substantially, and that the average size of tenant-operated farms has increased only slightly. Further evidence of the increase in size of owner-operated farms is obtained from analysis of land transfers in some 108 counties located throughout the United States. During the first 3 months of 1943, 44 percent of all purchases of farm land were made by owner operators who intended to operate the land themselves.

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FARM LABOR SUPPLY

THE total of 11,659,000 workers employed on farms on June 1, was about 2 percent below the number employed on farms June 1, 1942, and about 5 percent under the 1939-41 average for June of 12,204,000 workers. Farm wage rates were 37 percent above those of a year earlier. The average wage rate was the highest on record, 251 percent of the 1910-14 average. This compares with an index of 239 on April 1 of this year and 183 on June 1, last year.

Nearly all of the decrease from last year in total employment came from a decline of about 6 percent in numbers of hired workers. There were about 2,697,000 hired farm workers on June 1 compared with 2,880,000 for that date last season and the June 1937-41 aver-

age of 2,975,000. Total farm employment was higher on May 1, in all regions, but was lower than for June last year in all areas except in the East South Central States and the Pacific Coast States.

As usual farm wage rates were higher in the Pacific States region than in any other. This region also showed the sharpest increase in wage rates over June 1942—nearly 50 percent. Wages in New England and the Middle Atlantic and East North Central States advanced about 25 percent during the same period, and then increased about 35 percent in the Southern States.

Because of the heavy work load caused by the increased production of crops and livestock products and loss

of experienced workers to military service and industrial jobs, farm operators have lengthened materially their own workday. On June 1, for example, their average work day was reported at 12.8 hours, or 45 minutes per day longer than in 1940. The length of workday for farm operators was half an hour longer than in 1940 in the Atlantic Coast States, and was somewhat longer still in other regions. In the North Central States, operators were working 0.9 of an hour longer by the first of June than on that date three years ago. This increase in work by operators was the largest in the country.

THIS region also showed an increase of about half an hour in length of workday for hired farm workers, compared with June 1, 1940. Here again this region showed the largest increase for any section of the country, for there was relatively little change in number of hours worked per day by hired help in other regions. For the country as a whole, hired help averaged 10.7 hours per day on June 1 compared with 10.4 hours for June 1, 1940.

Some significance perhaps should be attached to the fact that the length of workday increased most in the States where power equipment is most generally used. The season was two weeks or more late in many areas, and this caused work to pile up and necessitated longer hours of labor. Floods and excessive rains in some sections added to the work load and required some farmers to put in longer hours.

Reflecting the wartime drain of mature workers from agriculture, about 13 percent of farm workers employed on June 1 were under 14 years of age compared with 4 percent on April 1 last year. This change reflects, in addition to the April to June seasonal change, an upward trend in employment of youngsters on farms. The percentage of workers under 14 years of age was highest in the Southern States and lowest in the Pacific Coast and New England States.

A sharp increase also is reported in the number and percentage of women working on farms. As in the case of the young people, the increased percentage of women workers is due largely to the fact that there is a great deal of farm work on June 1, such as picking fruit and berries, chopping cotton, and helping with truck crops that women can do. Although data for last June are not available, the percentage of women workers probably has increased materially during the past year.

FARM people throughout the Nation were exceptionally busy at the beginning of June. Great efforts were being made to offset the smaller than usual supply of workers and the general lateness of the spring work. At the same time, however, farmers generally were more concerned over the labor supply prospects for the coming harvest than over labor for planting and cultivating the crops. Farmers on the whole, appear to be adjusting their programs to labor conditions better than they did a year ago. Apparently they feel that, with the Government helping them to get workers, they will be able to turn out a large crop.

In New England, spring planting was nearing completion on June 1, although farm work was about a week later than usual. Farmers here express some doubt that the supply of labor for hay harvest will be adequate, especially in quality. Employment of youths and aged persons on New England farms has been of great help, but naturally those workers are not so skilled as the seasoned workers who have left the farms. The number of persons employed on farms in New England on June 1 totaled 257,000, compared with 259,000 on the same date last year.

Crops and farm work were far behind schedule in the Middle Atlantic States although some of the lag has been taken up. Farmers in up-state New York were still seeding late oats and barley and planting corn on

June 1, while farmers in southern New York were starting to harvest the hay crop. This bunching-up of the farm work in the Middle Atlantic region puts an added load on those now working on farms. The persons working on farms in these States was 4 percent smaller than on June 1 a year ago. The supply of workers, however, is now being augmented by large numbers of boys, women and old men and by the importation of workers from the West Indies. By June 23 there were about 6,000 Jamaicans employed on farms in the United States. In addition there were about 3,000 more at port of entry ready to be transported, to farms. Most of these were expected to be sent to farms in the North Central and Northeastern States.

AS WEATHER in the North Central States has been generally unfavorable this spring for farm work and for growth of crops, spring work was retarded. Toward the end of May, however, the weather improved and farmers have rushed their plowing and planting to try to make up some of the lost time. Many reports from this area tell of tractors running 24 hours a day. The number of persons employed on farms in the East North Central States June 1 was estimated at 1,502,000—a decrease of 28,000 or 5 percent from the total employed on June 1 last year. The total employed on West North Central farms—1,756,000 on June 1—was only 17,000 smaller than on that date a year ago. Farmers in this section apparently feel that government agencies will have to help them in obtaining laborers, particularly during the coming harvest.

Farm work in the South Atlantic States is not up to the usual schedule. The total number of persons employed on farms on June 1 was nearly 4 percent below that of a year earlier. Farmers, however, are working unusually hard to keep up with necessary cultivation and the harvest of potatoes

and other truck crops. There were about 3,000 Bahamian workers employed on vegetable farms in Delaware, Maryland, and Florida. These workers are expected to move north as harvest work develops in truck crop areas. In Georgia, Italian prisoners of war are working in the harvest of the peach crop.

In the East South Central States, an increase in family workers has more than offset a decrease in hired workers. Total farm employment on June 1 was 7,000 larger than on that date last year. The farm work load appears well in hand, but some apprehension is being felt regarding the expected large harvest. On June 1, Alabama farmers were near the peak of their spring work load. This was also true in Mississippi, where conditions were favorable for cultivation of corn and for chopping cotton and the completion of planting these crops.

RAINS and floods in Arkansas and Oklahoma ruined large areas of planted crops, and much replanting was done in June. For the West South Central States as a whole, farm work was greatly slowed up and the total number of persons employed—2,079,000 persons—was between 3 and 4 percent smaller than on June 1 a year ago. Cotton planting was about completed in North Texas. Chopping and hoeing of the crop was completed in southern Texas and was under way in east central and north Texas. Along the Red River, however, and the north central part of the State, fields became grassy as a result of continued and excessive rains. Wheat harvesting had started in the central part of the State. Sheep shearing was 75-90 percent complete in the important Edwards Plateau area, and mostly finished over the rest of the State on June 1.

Farm employment in the Mountain States was at about the same level as a year ago and farm work was making good progress.

ROGER F. HALE,
Bureau of Agricultural Economics

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935- 39= 100) ¹	Income of in- dustrial workers (1935- 39= 100) ²	Cost of living (1935- 39= 100) ³	1910-14=100					Prices paid, interest and taxes	Farm wage rates
				Whole- sale prices of all com- modi- ties ⁴	Prices paid by farmers for commodities used in—					
					Living	Produc- tion	Living and pro- duction			
1925	90	126	125	151	163	147	156	170	176	
1926	96	131	126	146	162	146	155	168	179	
1927	95	127	124	139	160	144	153	166	179	
1928	99	126	123	141	160	148	155	168	179	
1929	110	134	122	139	159	147	154	167	180	
1930	91	110	119	126	150	141	146	160	167	
1931	75	84	109	107	128	123	126	140	130	
1932	58	58	98	95	108	100	108	122	96	
1933	69	61	92	96	108	108	108	118	85	
1934	75	76	96	109	122	123	122	128	95	
1935	87	86	98	117	124	127	125	130	103	
1936	103	100	99	118	123	125	124	128	111	
1937	113	117	103	126	128	136	131	134	126	
1938	89	91	101	115	122	125	123	127	125	
1939	106	105	99	113	120	122	121	125	123	
1940	123	119	100	115	121	124	122	126	126	
1941	156	169	105	127	131	131	131	134	154	
1942	181	238	116	144	154	149	152	152	201	
1942—June	176	234	116	144	154	150	152	152	183	
1942—July	178	247	117	144	154	150	152	152	202	
1942—August	183	251	118	145	155	150	153	152	.....
1943—April	203	296	124	151	168	161	165	162	239	
1943—May	203	.....	125	152	169	162	166	163	.....
1943—June .....	.....	.....	.....	.....	170	162	167	164	251

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Poultry and eggs	All groups	
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	138	144	121	140	155	144	139	84
1928.....	130	162	176	159	151	158	163	149	89
1929.....	120	144	141	149	156	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	62
1932.....	44	47	82	102	63	83	82	65	53
1933.....	62	64	74	105	60	82	75	70	59
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	144	131	122	122	91
1942.....	119	155	125	199	189	152	151	157	103
1942—June.....	116	153	148	169	191	141	137	151	99
1942—July.....	115	155	131	200	193	144	145	154	101
1942—August.....	115	151	126	256	200	151	156	163	107
1943—April.....	146	167	189	231	218	180	178	185	114
1943—May.....	148	167	212	258	214	179	176	187	115
1943—June.....	151	166	234	308	211	178	179	190	116

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised March 1943. ³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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TOTAL production of food this year probably will surpass the 1942 record by around 4 percent and will be 31 percent larger than the average for 1935-39, it is estimated. This outlook is based on the July crop report, assuming average weather for the rest of the year and a continuation of the present trend in livestock production. Food crops probably will be 10 percent smaller than in 1942, but total production will be larger because of increased livestock production. Production of food-crops, though smaller than last year, will be about 11 percent above the 1935-39 average. Total food crop acreage in cultivation this year will be about 3 percent larger than that in 1942, the decline in food-crop production resulting from a decrease in yield per acre. * * * Seventy-five percent of the country's food production for this year has been allocated for civilian use, about 13 percent for the military forces, 10 percent for lend-lease shipment, and the rest for territorial shipments and other special needs. Civilian per capita consumption for 1943 as a whole, it is estimated, will be about 4 percent larger than the 1935-39 average, but will be 6 percent less than the record consumption in 1941.

Commodity Reviews

DEMAND: Incomes

CONDITIONS point to continued strong domestic consumer demand for farm products. Factory pay rolls, total and per employed worker, continue to set new high records. Total nonagricultural income payments, although not rising as fast as factory pay rolls, also are reaching new highs.

The Federal withholding tax on income will reduce the amount of income consumers will be able to spend. Even after taxes have been deducted, consumer income in the last half of this year will be slightly larger than in recent months and in the absence of controls would be sufficient to maintain prices of farm products at higher levels than at present.

Increase in demand caused by higher consumer incomes has not occurred uniformly in all groups of the population, for wages of some groups are much higher than those of others. The wage increases from January 1941 to April 1943 range from \$2.70 per week in retail trade to \$39.42 per week in water transportation. In the latter industry, bonuses for entering war zones are responsible for a large share of the increase in wages. Except for water transportation, the largest dollar increase, \$22.12 per week, was in shipbuilding. In general, the increases in dollars per week have been the greatest in mining and durable manufactures and least in the service industries, and the percentage increases have been greater for the industries which in January 1941 were in the upper half of the wage range than for industries in the lower half.

LIVESTOCK: Marketings

HOG production this year will be much the largest to date. The spring crop numbered 74 million head, 22 percent above the 1942 spring crop, and about 45 percent above the average total of spring pigs saved in the

10 years prior to the 1934 drought. According to the June pig survey, the number of sows indicated to farrow in the 1943 fall season was 25 percent larger than a year earlier. If the number of pigs saved per litter is about average, the fall crop will be about 53 million head. Because of the heavy drain being placed upon feed resources, the War Food Administrator has asked farmers to hold fall pig production in line with feed supplies.

Even if the fall crop falls below the 53 million head total now indicated, the total crop for 1943 will be substantially larger than the 105 million-head record last year. On the basis of this large increase in the number of hogs raised, slaughter supplies of hogs in the marketing year beginning next October will be much above those of any previous year. Because of the short supply of feed relative to numbers of livestock, average weights of hogs in the 1943-44 marketing year may be considerably lighter than this year.

Hog marketings picked up sharply in May and in June, reflecting the large increase in the 1942 fall pig crop over that of a year earlier and the delayed movement of late spring and summer pigs which had been fed to exceptionally heavy weights. There have been some reports in recent weeks of sharply increased marketings of bred sows and unfinished pigs. Thus far, however, there is little indication that hogs are being liquidated because of the tight feed supply situation.

Cattle marketings declined sharply in June, reflecting uncertainty on the part of producers as to the final effect of the price roll-back and the subsidy program upon prices of live cattle. Inspected slaughter for the month totaled 9 percent less than in May and 32 percent less than in June last year. Despite this reduction, the outlook is for increased marketings later this summer and fall. With a large num-

ber of cattle on ranges and in the Corn Belt and with feed supplies relatively scarce, marketings in the last half of the year may be substantially larger than the usual proportion of the year's total.

FEED GRAINS: Supply

THE feed grain supply for 1943-44 probably will be about 143 million tons on the basis of August 1 conditions. This total is 11 million tons smaller than the record last year, but 23 million tons larger than the 1937-41 average. Included in the supply are 400 million bushels of wheat, which could be made available for feed without bringing the carry-over next year below 250 million bushels. It includes also 40 million bushels of rye, expected imports of oats, barley, and feed wheat from Canada, and the domestic supply of four principal feed grains.

The corn supply in 1943-44 is expected to be about 3,275 million bushels, 393 million bushels smaller than the supply last year, but 224 million bushels larger than the 1937-41 average. The oats supply is indicated to be 7 percent smaller than last year, and the indicated barley supply 9 percent smaller. Allowing for further increase in livestock this year, the supply of feed per animal unit in the 1943-44 marketing year may be about 15 percent smaller than in 1942-43 and 10 percent below the 1937-41 average. However, disappearance per animal unit would be above this average if stocks at the end of the marketing year are reduced to a minimum.

Corn disappearance for the second quarter of 1943 was 15 percent larger than a year earlier and oat disappearance was 18 percent larger. Stocks of corn on July 1 totaled 827 million bushels, 30 million bushels less than on July 1 a year ago. A carry-over next October 1 of about 400 million bushels is in prospect.

Corn receipts at primary markets continue small. Commercial stocks of corn were reduced to 9.6 million bushels early in July, the lowest level

in recent years. Cash market prices of oats and barley increased 6 to 10 cents per bushel from the middle of June to the middle of July, reflecting increased demand for these grains because of reduced corn movement. Prices of byproduct feeds remain at the ceilings with a strong demand for available supplies

FATS, OILS: Production

PRODUCTION of oil from cottonseed, peanuts, soybeans, and flaxseed may be somewhat greater in 1943-44 than in the preceding year. Cottonseed oil production may be less than in 1942-43. An increase of 1.4 million acres is indicated in the flaxseed acreage for harvest in 1943, with production estimated at 54 million bushels compared with 40.7 million bushels last year. The amount of linseed oil produced from domestic seed in 1943-44 may be about 200 million pounds above that of a year earlier. Soybean acreage is expected to be 8.5 percent larger than last year. Whether oil production will be increased in the same proportion, is uncertain, however, as the final acreage for harvest and yield per acre are unknown. Peanut oil production may increase somewhat, assuming an average yield of peanuts per acre and the same utilization of peanuts for seed and food in 1942-43.

Utilization of fats and oils, including "foots," by the United States soap industry in 1942 totaled 1,987 million pounds, 12 percent less than in the peak year 1941. Apparently there was a substantial accumulation of stocks of soap by consumers and dealers in 1941 under the stimulus of rising prices and incomes. Utilization of coconut and palm oils in soap declined 418 million pounds in 1942, reflecting curtailed imports. Use of inedible tallow and greases, which were in relatively plentiful supply, increased 161 million pounds.

Most of the increase in domestic demand since 1941 has come from the combination of expanded employment

and higher wages in our heavy industries. And it is this high and still rising level of demand by domestic consumers which is responsible for the increase in prices of foods and other items in the cost-of-living index. It is true that military and lend-lease requirements have risen sharply, but, as far as food is concerned, these requirements have not done much more than offset the effect of increased production. Military and lend-lease disappearance of food was negligible in 1940 but accounted for 4 percent of our output in 1941 and 12 percent in 1942. The volume of agricultural food production, however, increased more than 3 percent from 1940 to 1941 and another 11 percent from 1941 to 1942.

DAIRY: Outlook

ALTHOUGH total milk production during the first half of this year was about the same as in the corresponding period last year, production in the latter half may be 1 to 3 percent less than in the corresponding period of 1942. Among conditions pointing to a greater than seasonal decrease in milk production in the rest of 1943 are: Constant price ceilings, tending to stimulate production during the spring and summer; possible lack of feed in eastern and southern deficit areas; and reduced supply of high-protein feeds per animal unit.

Consumption of fluid milk and cream in the second quarter of 1943 is estimated at 5 percent above that in the preceding quarter and 10 percent above that in the second quarter of 1942. Unless restricted in some way, fluid-milk consumption will continue at an unusually high level. Because total milk production may be smaller than a year earlier, and consumption of fluid milk has increased, production of manufactured dairy products in the remainder of the year will remain considerably smaller than in the corresponding months of 1942. Owing

to the unusual seasonal pattern followed last year, however, the percentage decrease in production of American cheese and evaporated milk may be somewhat smaller than during the first half of the year.

Butter and cheese stocks have continued to increase. Reports indicate that much evaporated milk has accumulated since rationing started in June. These stocks will be needed during the low production season of winter. Effective June 20, maximum prices for industrial casein have been increased 3 cents per pound. This increase should encourage the sale of skim milk off farms for use in producing casein, especially in areas where casein is the principal product manufactured from skim milk. Import permits for about 7 million pounds of casein, equivalent to 2 to 3 months of domestic production, recently were granted by the War Production Board.

POULTRY, EGGS: Marketings

FARM marketings of poultry, still on the upswing, will be larger in the remainder of 1943 than the record of a year earlier. Laying flocks were 14 percent larger in June than in June last year and on July 1 the number of young chickens on farms, at 729 million head, was 20 percent larger than on July 1, 1942. The increase in chickens raised will allow a substantial further large increase in numbers of layers and egg production next year. In view of the prospective tight feed situation, however, any increase in numbers of layers for 1944 probably will be smaller than usual relative to the increase in chickens raised.

The demand for poultry continues to exceed the supply, although marketings have increased greatly in recent weeks. Average price to farmers for chickens in mid-June was 25.1 cents per pound, compared with 18.5 cents a year earlier.

Production of eggs has fallen from the peak, but is much above the record of last year. Production is expected to fall off seasonally until the low of November. In early July, market supplies of shell eggs began to run short in some Eastern markets, even though some shell eggs were being withdrawn from storage. Combined holdings of shell and frozen eggs in storage on July 1 were the largest on record.

In early July, wholesale prices of eggs had increased from mid-June and the spread between wholesale prices and ceiling prices to retailers was narrowed further. The Office of Price Administration issued on July 5 ceiling prices for wholesale grades of eggs that were somewhat below prevailing levels. This announcement, effective July 12, brought some reduction in wholesale prices. But in mid-July wholesale egg prices averaged about the same as in mid-June and from 15 to 25 percent higher than in mid-July 1942. Mid-June average prices received by farmers for both eggs and chickens were the highest on record for that month except for 1919 and 1920.

WHEAT: Prospects

THE total 1943 wheat crop was indicated on August 1 to be 835 million bushels. This is 44 million bushels more than indicated a month earlier, 96 million bushels above the 1932-41 average, but 146 million bushels below the large crop of last year. Winter wheat production was estimated at 534 million bushels, and spring wheat at 301 million bushels, compared with 703 and 278 million bushels respectively for 1942.

The wheat carry-over of about 618 million bushels on July 1, plus the indicated 1943 crop, adds up to a prospective supply without imports of almost 1.45 billion bushels. Disappearance in 1943-44, expected to total 1.2 billion bushels, would reduce the

carry-over on July 1 next year to less than 300 million bushels. The expected disappearance would set an all time record. The 618 million-bushel carry-over includes about 215 million bushels of wheat owned by the Commodity Credit Corporation and 120 million bushels still under loan.

Disappearance in 1942-43 was the largest to date. It is estimated that wheat for food amounted to about 535 million bushels compared with 493 million bushels the previous year, and nonfood items and exports about 465 million bushels compared with 207 million bushels a year earlier. The large increase in nonfood uses reflects the large quantities used for feed and alcohol.

Wheat and rye acreage goals for 1944 were announced by the War Food Administrator on July 13. The wheat goal, at 68 million acres, is 26 percent above the 54.2 million acres seeded for the 1943 crop, but slightly below the 1932-41 average, 68.9 million acres. In 1937 there were 80.8 million acres, the largest on record. It was suggested that the acreage of rye be maintained in areas where rye will produce more per acre than any alternative crop.

The 1944 wheat goal calls for seeding approximately as large an acreage as in the record year of 1937 except in the North Central and Eastern States where other crops will contribute more to maximum food output. Compared with this year, the wheat goal provides for substantial expansion of acreage in the Great Plains States, from Montana and North Dakota to Texas; somewhat smaller increases in the Pacific Northwest; and about the same or slightly larger acreages in other areas. In broad terms, the War Food Administrator advised farmers to plant as much wheat as can be grown after reserving sufficient land for expanding more urgently needed crops and without departing from sound farming practices.

COTTON: Acreage

THE estimated 21,995,000 acres of cotton in cultivation on July 1 constitutes the smallest acreage since 1895. There were 23,302,000 acres cultivated in 1942 and 23,130,000 acres in 1941. The cotton acreage goal for 1943 is 22,500,000 acres.

Slight increases in acreage occurred in both North Carolina and Mississippi. South Carolina, Georgia, Tennessee, Alabama, Arkansas, Louisiana, and Texas made reductions of from 1 to 9 percent, and in other States reductions ranged from 10 to 26 percent. With abandonment and yields equal to the most recent 5-year average, production this season would be about 10.7 million running bales, 1.7 million less than last year.

Acreage in American-Egyptian cotton this season is estimated at 146,400 acres, compared with 192,900 acres last year. This reduction was shared by the 4 States in which American-Egyptian cotton is grown.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes ¹	Buying power of farm products ²
1942			
January.....	149	145	103
February.....	145	147	99
March.....	146	150	97
April.....	150	150	100
May.....	152	151	101
June.....	151	151	100
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	160	154	110
November.....	169	155	109
December.....	178	156	114
1943			
January.....	182	157	116
February.....	178	159	112
March.....	182	160	114
April.....	185	162	114
May.....	187	163	115
June.....	190	164	116
July.....	188	165	114

¹ Revised.

² Ratio of prices received to prices paid, interest, and taxes.

Prices of Farm Products

(Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State)

	5-year average		July 1942	June 1943	July 1943	Parity price July 1943
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....	88.4	83.7	94.6	124.00	126.00	146.00
Corn (bushel).....	64.2	69.1	83.1	106.00	108.00	106.00
Oats (bushel).....	39.9	34.0	43.9	64.8	65.8	65.8
Rice (bushel).....	81.3	74.2	170.6	180.00	177.00	134.00
Cotton (pound).....	12.4	10.29	18.55	10.98	19.60	20.46
Potatoes (bushel).....	69.7	71.7	124.5	138.00	167.00	1.21
Hay (ton).....	11.87	18.87	9.08	12.20	11.90	19.60
Soybeans (bushel).....	7.96	1.95	1.62	1.73	1.70	1.58
Peanuts (pound).....	4.80	3.65	5.59	7.01	7.15	7.92
Apples (bushel).....	9.96	1.90	1.62	2.70	2.55	1.58
Oranges, on tree, per box.....	1.81	1.11	1.55	2.59	2.74	1.92
Hogs (hundredweight).....	7.27	8.38	18.78	13.60	13.20	12.00
Beef cattle (hundredweight).....	5.42	6.66	10.70	12.80	12.60	8.94
Veal calves (hundredweight).....	6.75	7.80	12.43	14.20	13.90	11.10
Lambs (hundredweight).....	5.88	7.79	11.81	13.50	13.30	9.70
Butterfat (pound).....	26.3	39.1	37.6	49.2	49.2	40.5
Milk, wholesale (100 pound).....	1.60	1.81	2.42	3.02	3.05	2.46
Chickens (pound).....	11.4	14.9	18.7	25.1	25.3	18.8
Eggs (dozen).....	21.5	21.7	29.5	35.2	36.3	32.3
Wool (pound).....	18.3	23.8	39.8	41.3	41.5	30.2
Tobacco:						
Maryland, type 32 (pound).....	22.9	17.6	31.0	57.0	59.0	24.3

¹ Revised.

² Comparable base price, Aug. 1909-July 1914.

³ Comparable base price, Aug. 1919-July 1929.

⁴ Adjusted for seasonality.

⁵ Preliminary.

⁶ Base price crop years 1919-28.

TRUCK CROPS: Production

COMMERCIAL truck crops for fresh shipment remain smaller than a year ago. Production for fresh shipment is indicated to be about 11 percent less than in 1942. Acreage in these crops is estimated at 9 percent smaller than last year. Although below a year earlier supplies of the major vegetables, with the exception of celery, cauliflower, and spinach, will be larger during July and August than they were in June. However, the snap bean, carrot, cabbage and tomato crops are the only ones expected to be in materially larger supply this summer than last. Cantaloup, cauliflower, celery, cucumber, onion, and watermelon crops are expected to be much smaller than a year ago.

Planted acreage of vegetables for processing (excluding asparagus, carrots, and spinach in States other than California and Texas) is estimated at 2,039,540 acres. This total is 1 percent larger than last year and 56 percent above the 1932-41 average.

Estimates of planted acreage of individual vegetable crops for processing in 1943, compared with 1942, indicate the following increases: Snap beans, 18 percent; beets, 7 percent; sweetcorn, 6 percent; kraut cabbage, 4 percent; and peas, 2 percent. The following decreases are expected: cucumbers for pickles, 29 percent; California and Texas spinach, 23 percent; lima beans, 7 percent; tomatoes, 2 percent; and pimientos, 1 percent. California and Texas spinach production (for processing) this season is estimated at 41,400 tons, or 33 percent below production of last year. Snap bean production, despite an 18 percent acreage increase, probably will be only about 7 percent larger than last season, because of lower yields.

FRUITS: Outlook

OUTLOOK for fruit crops this year is much less favorable than last year. Production of the principal deciduous fruits, including grapes, will be about 17 percent less than last year.

Decreases in crops for 1943, compared with production in 1942, are indicated as follows. Peaches down 36 percent; pears, 22 percent; sweet cherries, 16 percent; sour cherries, 56 percent; apricots, 53 percent; and plums, 8 percent. Increases, however, are indicated for some crops, including a 11-percent increase for grapes, 12 percent for California prunes, and 10 percent for Washington, Oregon, and Idaho prunes. August 1 production estimates for the commercial apple crop indicate a crop 28 percent smaller than last year. Citrus production may be about as large in 1943-44 (crops produced from the bloom of 1943 and marketed in the fall of 1943 and in 1944) as in 1942-43. Total fruit production will be about 11 percent less than in 1942-43.

By July 3, shipments of this season's deciduous tree-fruit and grape crop had totaled 6,063 cars, compared with 6,415 cars shipped during the period last season. This total does not take into account the heavier loadings per car this year. Shipment of cherries and peaches to fresh market has been much smaller than a year ago, but plum, prune, and grape shipments have been larger. With the strawberry season ending, the carlot shipments thus far have totaled only 2,500 cars, or about two-fifths the total of last season.

Interstate movement of Pacific coast pears into the fresh market is to be limited this season, in order to obtain needed supplies in processed form.

In view of crop prospects and restrictions on shipments for fresh use, supplies of deciduous fruits on the fresh market during July-August can be expected to be materially smaller, but citrus fruits will be about as plentiful as in 1942.

POTATOES: Record

THE potato crop this year is expected to set a new record. Acreage for harvest is estimated at 3,363,100 acres, nearly a fourth larger than in 1942. The year's crop is forecast at about 443 million bushels.

Compared with last year, production is expected to be 25 percent larger in the 12 early States, 13 percent larger in the 7 intermediate States, and 19 percent larger in the 30 late States.

Harvesting is now finished in the second group of early States and about completed in the intermediate States. Large crops in these areas have brought a temporary glut of the market. To relieve this situation, the Government had purchased about 6,600 cars of potatoes through August 7—primarily in North Carolina, Arkansas, Oklahoma and Virginia.

SWEETPOTATOES: Crop

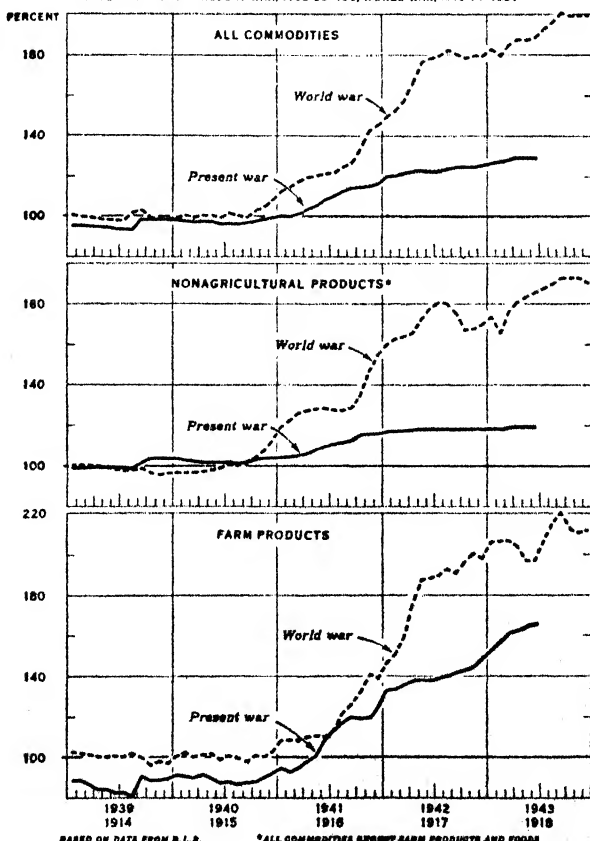
SWEETPOTATO production this year probably will run to 81 million bushels, 24 percent larger

than the crop of 1942, and one of the largest on record. Acreage planted this year is estimated at 923,000 acres, or 30 percent more than in 1942. Growing conditions have been favorable. Shipments in sizable volume began in the latter part of July. Prices of sweetpotatoes have declined since early June but remain more than twice those of a year ago.

RICE: Production

ARICE crop of 71.8 million bushels was indicated July 1, which is 8 percent above the previous record crop of 66.4 million bushels produced in 1942, and 52 percent above the 10-year (1932-41) average of 47.3 million bushels.

WHOLESALE PRICES OF ALL COMMODITIES, NONAGRICULTURAL PRODUCTS, AND FARM PRODUCTS, UNITED STATES, DURING TWO WAR PERIODS
INDEX NUMBERS (PRESENT WAR, 1935-39=100; WORLD WAR, 1910-14=100)



U. S. DEPARTMENT OF AGRICULTURE

U. S. E. 9000

INCOME OF FARM FAMILIES

THE increase in farm income in 1942 over 1941, the greatest in any year in the Nation's history, brought the aggregate net cash farm income of operators to the highest point ever reached. Of course, to find the meaning of these annual totals in terms of farm family welfare requires analysis of the distribution of farm income in these two years.

On the basis of information secured from the Rural Study of Family Spending and Saving in Wartime (Bureau of Human Nutrition and Home Economics) relating to distribution of income among farm families during 1941 and estimates of changes in the overall farm income aggregates made by the Bureau of Agricultural Economics, the changes in distribution of income of farm families from 1941 to 1942 have been estimated. These estimates relate only to the families that operated farms and received income from the sale of farm products, excluding the families of farm wage workers who were not farm operators.

Half of the farm operator families in 1941 received less than \$760 net cash income from all sources, it appears, including net receipts from the

operation of the farm, earnings from employment off the farm, rents, pensions, and other income. In 1942, the income point which divides the families into equal numbers was moved to \$1,320. Thus families at or near the middle of the income scale had nearly a 75 percent increase in net cash income on the average, a gain which was only in part offset by a rapid rise in prices paid by farmers for commodities used in family living.

FOR the families above and below the middle range, the data in table 1 indicate the estimated increase in the income received in 1942 over 1941. Hardly less striking than the general rise in level for each tenth of the families is the great increase in spread of families over the income scale. Whereas the middle 60 percent of the families in 1941 received incomes varying within a range from \$260 to \$1,670, the corresponding range in 1942 was from \$430 to \$2,740. Thus while the level of each group was increased, the absolute differences in income among the income groups were greatly widened.

TABLE 1.—Income From All Sources: Share of Aggregate Net Cash Income Received By Each Tenth of the Nation's Farm Operator Families, 1941 and 1942

Proportion of fam- ilies (tenths)	1941 ¹		1942 ²		1942 income as percent of 1941 income
	Income range	Share of aggre- gate	Income range	Share of aggre- gate	
	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Percent</i>
Highest.....	2,325 and over.....	39.3	3,730 and over.....	37.0	150
Ninth.....	1,670-2,324.....	16.5	2,740-3,729.....	16.2	156
Eighth.....	1,280-1,669.....	12.1	2,140-2,739.....	12.2	160
Seventh.....	985-1,279.....	9.5	1,660-2,139.....	9.6	161
Sixth.....	760-984.....	7.0	1,320-1,659.....	7.1	161
Fifth.....	575-759.....	6.3	930-1,319.....	6.4	164
Fourth.....	405-574.....	4.2	705-929.....	5.0	190
Third.....	260-404.....	3.0	430-704.....	3.8	196
Second.....	120-259.....	1.8	130-429.....	2.1	202
Lowest.....	Under 120.....	.3	Under 130.....	.6	328

¹ Based on data from the Rural Study of Family Spending and Saving in Wartime conducted by the Bureau of Human Nutrition and Home Economics.

² Percentage change from 1941 in aggregate and in number of farm operator families based on estimates of the Bureau of Agricultural Economics adjusted for comparability of concepts used in the family expenditure studies; location of decile points estimated on the basis of an analysis of data on changes in distributions of income of farm operator families from the Consumer Purchases Study for 1935-36 and the Study of Family Spending and Saving in Wartime for 1941.

Although there was a greater income spread between farm families of the lowest group and those of the highest, the percentage increase in the income of the lower groups was greater than in the income of the upper. While the lower half of the families received 15.4 percent of the total income in 1941, they received 17.9 percent of the much greater aggregate in 1942. In fact, all groups save the upper 20 percent received a larger share of the 1942 income than of the 1941. Although its absolute spread was increased, nevertheless, the 1942 distribution of income appears to have been relatively more favorable to the lower income groups.

THE direction of changes in distribution of total net cash income held also for the distribution of income derived from farming alone (table 2), and in general, each tendency was emphasized. The median family income derived from farming more than doubled, increasing from \$440 to \$980. The income range from \$65 to \$1,310, including the middle 60 percent in 1941, increased to a range of \$380 to \$1,815 in 1942. Most striking of the changes is in the proportion of the total farm income which went to the lower 50

percent of the farmers. In 1941 this group received only 7.9 percent of the aggregate net cash income from farming, while in 1942 it is estimated that their share more than doubled, reaching 16.4 percent. During both years these families received a greater proportion of their income from nonfarm sources than did the upper 50 percent. Income from nonfarm sources represented a considerably larger percentage of their total net cash income in 1941 than in 1942, although its absolute value was greater in 1942.

Some of the general upward shift in per family farm income may be explained by the decrease in the number of farm families from 1941 to 1942 although the primary factors were the sharp increase in prices and sales of farm products. A larger than proportionate share of the decrease in number of families probably occurred among families at the lower end of the income scale. Competing employment opportunities led a relatively larger number of the smaller operators to give up farming for nonfarm jobs. Some of them left their farms and moved to towns or cities, resulting in many cases in consolidation or abandonment of farming units. In other cases the operation of smaller units

TABLE 2.—Farm-Derived Income: Share of Aggregate Net Cash Income Received By Each Tenth of the Nation's Farm Operator Families, 1941 and 1942

Proportion of families (tenths)	1941 ¹		1942 ²		1942 income as percent of 1941 income
	Income range	Share of aggregate income	Income range	Share of aggregate income	
	<i>Dollars</i>	<i>Percent</i>	<i>Dollars</i>	<i>Percent</i>	<i>Percent</i>
Highest.....	1,950 and over.....	45.0	2,660 and over.....	36.9	140
Ninth.....	1,310-1,949.....	18.8	1,815-2,659.....	15.5	141
Eighth.....	920-1,309.....	13.5	1,430-1,814.....	12.0	152
Seventh.....	660-919.....	8.4	1,220-1,479.....	9.5	193
Sixth.....	440-659.....	7.0	980-1,219.....	8.7	212
Fifth.....	295-439.....	3.9	780-979.....	6.0	262
Fourth.....	175-294.....	2.5	590-779.....	5.4	354
Third.....	65-174.....	1.1	380-589.....	4.0	671
Second.....	Under 65.....	.4	185-379.....	1.6	
Lowest.....	Net loss.....		Under 185.....	.4	

¹ Based on data from the rural Study of Family Spending and Saving in Wartime conducted by the Bureau of Human Nutrition and Home Economics.

² Percentage change from 1941 in aggregate and in number of farm operator families based on estimates of the Bureau of Agricultural Economics adjusted for comparability of concepts used in the family expenditure studies; location of decile points estimated on the basis of an analysis of data on changes in distributions of income of farm operator families from the Consumer Purchases Study for 1935-36 and the Study of Family Spending and Saving in Wartime for 1941.

was discontinued when the operator took on a full-time nonagricultural job, even though the farm home continued to be the family's residence.

The changed income situation is unquestionably favorable to the welfare of farm families as a whole. The income of every group increased by a greater percentage than the increase in farm family living costs and the income of lower groups increased proportionately more than that of higher groups. The situation affords no basis for complacency, however, as to the present income situation of farm families. Half of the families of farm operators still receive a total net in-

come from all sources of less than \$1,800, even when some \$400 is added to net cash income as an estimate of the value of housing and food provided by the farm. In spite of certain changes favoring the lower group, the upper 10 percent of the families received 37 percent of the aggregate net cash income derived from farming in 1942, while the lower 10 percent received only 0.6 percent.

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COUNTRY BANK DEPOSITS

THE current high level of farm income has been accompanied by a large accumulation of unused farm purchasing power in the form of deposits in banks serving agricultural areas. Demand deposits of country banks (members of the Federal Reserve System in places of less than 15,000 population) in 20 of the leading agricultural States were 67 percent higher in June 1943 than in December 1941. This recent increase is a continuation of the upward trend in effect since the banking holiday of 1933 except for a brief interruption following the depression of 1937. From an annual monthly average of 48.6 (1924-29=100) in 1933, demand deposits continued to increase until the predepression level was reached in 1936. After a decrease in the latter part of 1937-38, deposits resumed their upward trend and with the outbreak of the war in Europe, the rate of increase accelerated.

Demand deposits of country banks represent the accounts to which are credited most of the money receipts of agricultural communities and from which are debited most of the money disbursements. In a period of rapid expansion of bank credit in the economy as a whole, bank deposits in agricultural areas will grow as part of this general movement. Because the

average volume of business is larger for each individual operator, balances carried in the form of both bank deposits and cash tend to increase.

An additional factor tending to expand deposits in rural areas is the restricted outlets for the spending of farm income for equipment, improvements, and durable consumer goods. As indicated in the accompanying chart there has been in the past a close correlation between country bank demand deposits and rural retail sales. Since the early part of 1942, however, demand deposits have increased at a more rapid rate than rural retail sales (Department of Commerce index). To some extent this may reflect the unavailability in agricultural areas of many things which otherwise would have been purchased out of the increased income.

SINCE the middle of 1942, the increase in deposits has taken place at a more rapid rate in country banks than in the country as a whole. This indicates that the inflow of funds to agricultural communities has been in excess of the payments which these communities have been required to make outside. In part, this increase in net balance of payments may be the result of inability to purchase

needed equipment and supplies referred to above.

The increase in the volume of deposits has been greatest in the Corn Belt States as indicated in the accompanying table. Particular areas of individual States, however, have shown a much more rapid rate of increase than the average for the State as a whole. An analysis, by counties, of the increase in deposits during 1942 of all insured commercial banks, published in the July 1943 Federal Reserve Bulletin, indicates that "The largest percentage increases occurred in the tier of States running from southeastern New Mexico and the panhandle of Texas up through Oklahoma, Kansas, Nebraska, and the Dakotas. Large increases also appear on the coast of North Carolina, in Arizona and Utah, and scattered through the Southern and Western States. The large increases in western Kansas and some of the surrounding territory, which was known as 'dust bowl' country, may have been associated with the ample rainfall in the year 1942 combined

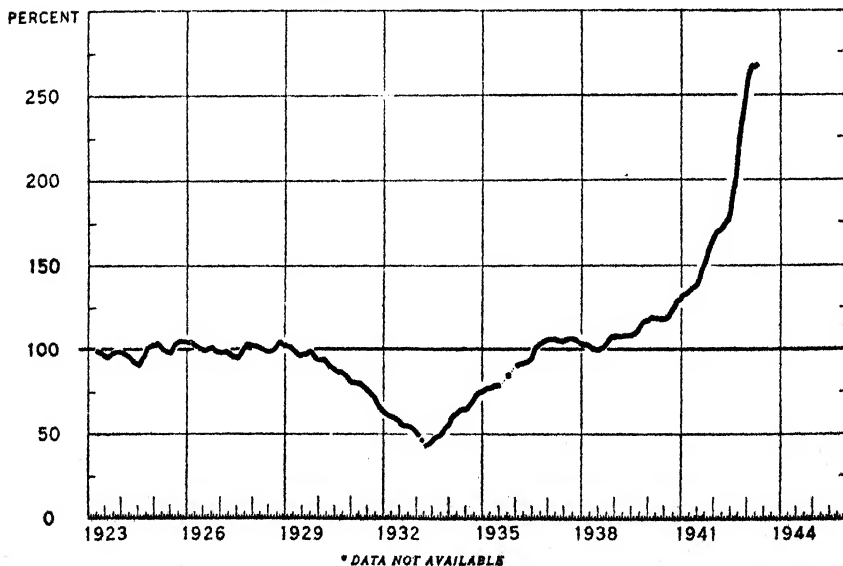
with greatly increased prices of agricultural products."

A large part of the increase in deposits of country banks reflects the building up of cash reserves by farmers. In 1942, net cash farm income was estimated at \$8,201,000,000, an amount almost twice as large as 1941 and the highest on record. According to a survey conducted by the Chicago Federal Reserve Bank in April of this year, bankers of the States of Illinois, Iowa, Indiana, Michigan, and Wisconsin estimated that approximately 32 percent of the increased net cash farm income was accumulated in increased bank balances and 8 percent in increased currency holdings. It was estimated also that 42 percent of the net cash farm income was used for the payment of mortgages and other debts, 13 percent for investment in War Bonds, and 5 percent for use in other ways.

THE increase in farmers' holdings of deposits and currency and their investments in war bonds will provide

DEMAND DEPOSITS OF COUNTRY BANKS IN 20 LEADING AGRICULTURAL STATES, 1923-43

INDEX NUMBERS (1924-29=100)



Demand deposits of country banks, 1924 to date (Index 1924-29=100)¹

Year and month	Twenty of the leading agricultural States ²	Seven Corn Belt States ³	Eight cotton growing States ⁴	Eight range States ⁵
1924	96.6	100.1	98.3	96.1
1925	102.1	103.1	105.2	96.5
1926	101.6	102.3	104.7	98.9
1927	99.0	97.6	100.1	98.4
1928	101.7	99.7	98.7	106.6
1929	99.0	97.2	93.0	103.6
1930	89.4	90.7	77.2	91.3
1931	75.4	78.1	59.6	76.2
1932	57.3	59.6	41.8	54.7
1933	48.6	48.8	41.4	46.8
1934	66.0	70.7	59.1	63.9
1935	(6)	(6)	(6)	(6)
1936	97.6	106.9	94.7	101.3
1937	105.7	115.4	105.0	110.4
1938	102.7	112.4	93.3	106.4
1939	110.3	122.1	108.9	114.9
1940	121.1	135.6	115.2	125.0
1941	141.1	161.8	139.6	141.0
1942	191.4	216.6	192.9	181.9
1943:				
June	274.4	309.5	273.3	270.9

¹ Based upon data reported by member banks of the Federal Reserve System located in places of less than 15,000 population (1930 Census). Each deposit series is weighted, the deposits for each State having been given a weight equal to the proportion, in the base period, of that State's cash farm income to the total cash farm income of the group of States.

² Ark., Ga., Ill., Ind., Iowa, Kans., Mich., Minn., Miss., Mo., Nebr., N. Y., N. C., N. Dak., Ohio, Okla., Pa., S. Dak., Tex., and Wis.

³ Ohio, Ind., Ill., Minn., Mo., Nebr., and Iowa.

⁴ N. C., S. C., Ga., Ala., Miss., Ark., La., and Okla.

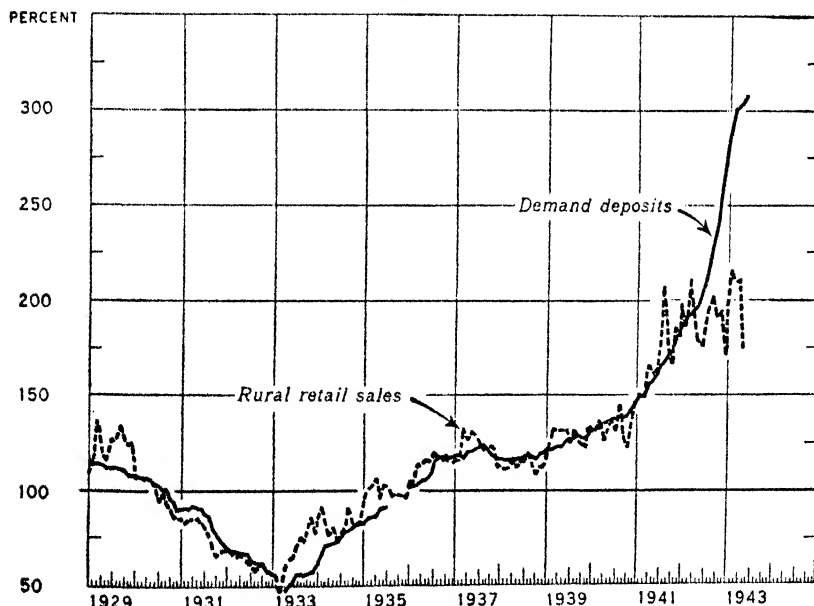
⁵ Mont., Colo., Ariz., Idaho, Nev., N. Mex., Utah, and Wyoming.

⁶ Five months of 1935 are unavailable.

⁷ Beginning 1941, data have been adjusted for changes in places of less than 15,000 population resulting from reclassifications made in 1940 Census.

DEMAND DEPOSITS AND RURAL RETAIL SALES, UNITED STATES, 1929-43

INDEX NUMBERS (1929-31=100) ADJUSTED FOR SEASONAL VARIATION



them with reserves which will be essential in the post-war period. While net cash farm income is at a record level, a considerable portion of this income represents payments for the wearing out of capital equipment and other resources that under war-time conditions cannot be replaced because of priorities and restrictions on building. According to Bureau estimates, expenditures on buildings and machinery dropped from \$1,802,000,000 in 1941 to \$1,359,000,000 in 1942, a decrease of nearly \$450,000,000. Continued scarcity of farm machinery and building restrictions during the

war period will contribute to a further increase in the backlog of replacement demands that will have to be financed after the war is over. If farmers resist the temptation to utilize deposits in country banks for the unwise purchase of farm lands at inflated values, these deposits as such or through their investment in war bonds may be retained as reserves for re-equipping farms with machinery and buildings that have not been available for replacement during the war period.

NORMAN J. WALL,
Bureau of Agricultural Economics.

CROP PRODUCTION

ACREAGE in crops this year is the largest in 11 years, and yields per acre are expected to be "generally good," according to report by the United States Crop Reporting Board on the basis of July 1 conditions.

Total crop production in 1943 is forecast at about 114 percent of the 1923-32 average, compared with the very high level of 126 percent last year. The 1943 figures allow for crops not yet planted or not yet estimated and for normal losses from drought and other causes.

In most areas from Missouri, Iowa, and Minnesota, eastward to Pennsylvania, and New York, crops are late and prospects are less favorable than at this period in any of the last 5 years. Nonirrigated crops are also poor in the drought area in the Southwest. Elsewhere prospects range mostly from fair to good. Only nine scattered States, however, report crop conditions as good as at this time last year.

In spite of floods, a late spring, and the necessary disturbances of war, harvested acreage of the 52 principal field crops probably will be around 347 million acres, compared with 340 million last year and the 1932 peak of 362 million. Acreages of crops other than cotton may even exceed the pre-drought peak. Corn acre-

age has been increased 5 million acres, or more than 5 percent, above the acreage last year.

Total acreage in 7 "war crops" shows a gain of close to 5 million acres. Increases over 1942 include: flaxseed, 1,400,000 acres or 33 percent; soybeans, 1,200,000 acres or 8 percent; peanuts, 600,000 acres or 14 percent; beans, 600,000 acres or 29 percent; dry peas, 220,000 acres or 47 percent; potatoes, 650,000 acres or 24 percent; and sweetpotatoes, 220,000 acres or 30 percent. Other important acreage gains from 1942 include an increase of 9 percent for sorghums and 7 percent for tobacco. Acreages of cotton, barley, and rye were each reduced between 1 and 3 million acres, partly to make way for other crops. Acreage in sugar beets, influenced by shortage of labor and the competitive demand for other crops, was reduced 37 percent. Acreage in watermelons and cantaloups was reduced 31 percent and other vegetables grown for market were reduced about 4 percent.

LARGE increases in acreages of certain crops will help boost their production above that of any past year. Bumper crops of dry beans, peas, peanuts, flaxseed, rice, potatoes, and sugarcane seem indicated. Large

crops of hay, soybeans, and barley are expected. Production of sorghums for grain may reach a near record, if there is enough rain to permit planting all the acreage planned. Wheat was helped by good rains in the northern part of the Belt and the forecast is 8 percent above expectations in June. Probable wheat production in 1943 is placed at 791,000,000 bushels, close to average production, except for the drought years, but far below the 981,000,000-bushel crop of last year.

Corn production is forecast to be 2,707,000,000 bushels. This total would be far below the 3,175,000,000 bushels harvested in 1942 but somewhat larger than other corn crops since 1932. The forecast of 1,242,000,000 bushels of oats indicates a large crop, though one still less than the very large crop of last year.

Aggregate tonnage of the 4 feed grains probably will be about 107 million tons, compared with nearly 124 million last year, 106 million in 1941, and usual production of 95 to 100 million tons.

Cotton acreage is slightly below 22 million acres, a cut of 5.6 percent from 1942 and the smallest acreage in more than 40 years. Prospects are that the tobacco crop will be about average at nearly 1.4 billion pounds.

ON July 1, wheat stocks on farms totaled 190,000,000 bushels, 16 percent more than on July 1, 1942, and double the holdings at the same season in any of the previous 15 years. Stocks of other grain on farms included some 813,000,000 bushels of corn and 236,000,000 bushels of oats. The total of feed grains was probably about 28.6 million tons, not much above average July stocks in the last 4 years. Assuming a 10 million-ton reduction in farm stocks by next July and a 107 million-ton production of feed grains this season, the quantity of these grains indicated to be used during the current 12-month period would be 117 million tons, or about 4 percent less than the farm disap-

pearance of feed grains during the past 12 months. At the same time, the number of livestock units has gained about 10 percent now since this time last year and is still increasing. As the season advances, prospects may change, but indications now are for a 12-month disappearance of 88 percent as much feed grain per unit of livestock as was used for all purposes last season, or about 93 percent as much as during the 5 previous feeding years since the droughts. A harvest no larger than now indicated would necessitate some changes in the rates of feeding and possibly some adjustments in either the numbers or weights of meat animals or poultry.

Hay and roughage supplies probably will be ample in the country as a whole, although local shortages may develop in parts of the West and Southwest. Taking account of hay supplies carried over and the prospective increase in the number of cattle, supplies of hay per unit of livestock will be nearly as large as during the last 5 years and larger than in other years since 1927.

CONDITION of western ranges was about equal on July 1 to the long-time average for the date. Prospects were good in the North but rain was needed in a large southwestern area that included New Mexico and Arizona and extended into adjoining States.

For peaches, pears, grapes, cherries, plums, prunes, and apricots, the total production in prospect for 1943 is 12 percent less than in 1942 and 6 percent below the 1932-41 average. Condition of commercial apples points to a decrease in the 1943 apple crop somewhat similar to the decline in aggregate production of the 7 crops for which forecasts have been made. Apricots, peaches, cherries, and pears will be in much smaller supply than in 1942 and considerably below average. Plum production in California and Michigan is about average. Prune production on the Pacific coast

and in Idaho is 10 percent larger than in 1942 but is a little below average. A large crop of grapes is in prospect.

Conditions remain favorable for an aggregate tonnage of citrus fruits from the bloom of 1943 which will start to market in November, about in line with the large production during the 1942-43 season (from bloom

of 1942). Prospects appear excellent for the new crops of oranges and lemons but not quite as good for grapefruit as in 1942-43. Condition of tangerines is materially below that of 1942.

JOSEPH A. BECKER,
Chairman, U. S. Crop
Reporting Board.

FEED OUTLOOK

THE 1943 feed grain supply, based on August 1 prospects, will be 19 percent larger than the average for the past 5 years and 33 percent larger than the average for the past 15 years. The prospective supply, however, is 7 percent smaller than the record supply last year, and about 15 percent smaller in relation to the expected number of grain-consuming livestock to be fed. Unless prospects for the 1943 corn crop improved further during the next 2 or 3 months, farmers in 1944 will have to reduce the quantity of feed concentrates fed per animal or reduce the number of livestock on their farms. Because of reduction in the feed supply the total output of livestock products may be smaller in 1944 than in 1943, but increased slaughtering of

livestock now on hand may maintain or increase supplies of meat available for lend-lease, military, and civilian consumption during the next year.

In the 1942-43 feeding year about 136 million tons of feed grains, including wheat and rye fed, were consumed in the United States. This consumption total was much larger than in any past year, and was more than one-third larger than the average of the past 5 years, or in the pre-drought 1928-32 period. Disappearance per grain-consuming animal unit on farms also was the largest on record and 13 percent larger than during the average for the past 5 years. During the 1942-43 marketing year, stocks of oats and barley were increased by about the quantity of those grains imported,

Supply and Disappearance of Feed Grains In Relation to Grain-Consuming Livestock, Averages 1928-32 and 1937-41, Annual 1939-43

Year beginning	Supply						Total supply	Grain-consuming animal units	Supply per animal unit	Domestic disappearance	Disappearance per animal unit
	Corn Oct. 1	Oats July 1	Barley June 1	Grain sorghum production	Wheat fed July-June	Rye fed July-June					
Average, 1928-32.....	<i>Mil. bu.</i> 2,717	<i>Mil. bu.</i> 1,374	<i>Mil. bu.</i> 299	<i>Mil. bu.</i> 61	<i>Mil. bu.</i> 114	<i>Mil. bu.</i> 13	<i>Mil. tons</i> 111.1	<i>Mil.</i> 138.3	<i>Tons</i> 0.80	<i>Mil. tons</i> 100.4	<i>Tons</i> 0.73
Average, 1937-41.....	3,051	1,303	335	77	121	18	120.6	132.6	.91	99.1	.78
1939.....	3,165	1,154	336	53	105	18	120.3	138.5	.87	96.1	.69
1940.....	3,150	1,394	367	83	109	16	125.4	133.4	.94	101.9	.76
1941.....	3,321	1,404	432	112	109	21	132.8	143.1	.93	113.3	.79
1942.....	3,668	1,598	1,527	107	309	27	154.9	158.9	.97	135.8	.85
1943 ¹	3,276	1,484	1,473	124	1400	40	143.4	176.0	.82	135.0	.77

¹ Includes imports.

² Preliminary forecast.

which indicates that about 1,360 million bushels of oats and 421 million bushels of barley were used in the United States, in each case the largest in 15 years. Stocks of corn by next October probably will be reduced nearly 100 million bushels, or down to about 400 million bushels from a year earlier. This would mean that about 100 million bushels more than the record corn crop of 3,175 million bushels were used in this country during the marketing year ending September 30. In addition, farmers fed about 309 million bushels of wheat, 27 million bushels of rye, and over 70 million bushels of imported oats and barley.

Commodity Credit Corporation is now selling feed wheat under congressional authorization at prices ranging in July from \$1.05 to \$1.12 per bushel. On July 1, 205 million bushels of wheat were owned outright by the Corporation and an additional 122 million bushels were under seal for loans. The quantity of wheat sold by the CCC for feed in 1943-44 may be smaller than the 275 million bushels sold during 1942-43. But with smaller feed grain supplies in prospect, the quantity of wheat fed on the farms of wheat growers may be somewhat larger than the 100 million bushels these growers fed in 1942-43.

ANOTHER large hay supply is in prospect this year, as a result of favorable weather in most parts of the country. Indicated production of tame and wild hay combined on August 1 was 99 million tons, compared with 105 million tons last year and with the 1937-41 average of 90 million tons. Carry-over of hay this year was 13 million tons, 2 million tons larger than last year, making a total supply of 112 million tons for 1943-44. This total is only 4 percent smaller than that of last year, and the second largest supply in 25 years.

Pastures on July 1 were in the best condition since 1927, with the exception of conditions July 1 last year. Ample moisture and warm weather caused much improvement in pastures in the North Central States during June. For the country as a whole, the condition of pastures declined seasonally during July and on August 1 it was 82 percent of normal, or 5 points lower than on August 1, 1942.

On the basis of August 1 crop prospects, assuming that about 400 million bushels of wheat will be fed during the fiscal year, and with a rough allowance of imports of grain for feeding from Canada, the supply of feed grains for 1943-44 will total 143 million tons. This is about 7 percent smaller than the supply in 1942-43.

Supply of Protein Feeds Available for Livestock Feeding, and Quantities Per Animal Unit, 1937-41

Year beginning October	Four oil meals ¹	Animal proteins ²	Miscellaneous proteins ³	Total oil meal equivalent	Animal units ⁴	Supply per animal unit
	1,000 tons	1,000 tons	1,000 tons	1,000 tons	Millions	Pounds
Average 1937-41.....	3,953	2,630	1,146	8,151	116.1	140
1940.....	4,438	2,781	1,256	8,924	117.3	152
1941.....	4,748	2,521	1,548	9,092	127.4	143
1942.....	6,115	2,520	1,580	10,487	143.7	146
1943 ⁵	6,250	2,530	1,670	10,700	160.0	134

¹ Stocks of cottonseed meal and peanut meal Oct. 1, plus October-September production and net imports of 4 oil cakes and meals, excluding cottonseed cake and meal used for fertilizer on the farms of cotton growers.

² Calendar year following, tankage, meat scraps, fish meal, skim milk, and milk products.

³ Gluten feed and meal, brewers' dried grains, distillers' dried grains, and copra meal.

⁴ Grain-consuming animal units excluding horses and mules.

⁵ Preliminary forecast.

ing wages in the area for a given type of work.

Where workers cannot travel to and from home every day, camps have been set up to provide living accommodations.

When a worker is placed on a farm or food-processing job he becomes a member of the Crop Corps, and is eligible for a certificate testifying to his "patriotic service on a farm or in a food-processing factory." These certificates are signed by the War Food Administrator, the Chairman of the War Manpower Commission, and the State Extension Director.

Formal training is not provided emergency workers since their tasks are fairly simple and can be learned quickly on the job—such as fruit and vegetable picking, cotton-chopping, beet-thinning, weeding and hoeing. Special training is provided, however, for year-round members of the Women's Land Army, and for boys and girls of the Victory Farm Volunteers.

Land Army women who plan to work on a full-time basis are expected to take from 3 to 6 weeks' training in a state agricultural college or other agricultural school selected for such training. Activities studied include dairy and poultry work, truck farming, horticulture, bee keeping, or other aspects of farming typical of the area in which they are specifically interested, as well as the use of farm machinery and tools. Women who are enrolled for seasonal work only, take a short preliminary course or learn on the job.

Contrary to practice in Great Britain, women in the Land Army can also relieve farm women of general household duties, food preservation, and child care, in order that farm women already versed in farm work may devote their time to that. Training WLA members in farm home work is done on the job by farm women.

Although the Women's Land Army is a new movement in America, it is already a proven success in other countries of the United Nations. Last summer many women worked on

farms. The marked success of these efforts encouraged further development and enlargement of this activity. Another encouraging factor was the successful operation of similar programs in other countries, notably Canada, Australia, and Great Britain. In the case of Great Britain, where the program has been in effect since 1939, the growing importance of its contribution can be measured by the fact that while in December 1939 only 2,800 of the 15,000 volunteers were employed, some 52,000 members of the Land Army were at work in September 1942.

SINCE the U. S. Crop Corps program was unable to get into full swing until late in the spring, emphasis is being placed at the moment on getting the present food production job done as quickly and efficiently as possible. For that reason, the WLA is now devoting most of its efforts to emergency farm work. When the peak harvest season is at an end, it is expected that increased attention will be given to the training and placement of women farm workers on a year-round basis.

Thousands of boys and girls are seizing the opportunity afforded them by the U. S. Crop Corps to perform useful, healthful, and patriotic service out-of-doors, and to broaden their general knowledge by learning something of life on a farm. Many of these Victory Farm Volunteers live on the farm with the farm family, and do work of a general nature; others perform specialized work such as cultivating and harvesting fruits and vegetables, and live at home or in camps provided by the Government.

These young workers receive prevailing wages based on the amount and type of work done. In common with other members of the Crop Corps, Victory Farm Volunteers are expected to pay their own expenses, although in some instances farmers furnish transportation and room and board as part of their pay.

IN ORDER to secure some farm experience in preparation for their entry into the ranks of the VFV, many high school students spent several weekends last spring on farms. They also attended lectures given by leading farmers, agricultural agents, vocational teachers and others on various aspects of agriculture and agriculture's war effort.

Supervision of these boys and girls includes regular visits to those living on farms by the county labor assistants of the Extension Service. Camp supervisors have been hired to direct camp activities, and other supervisors direct special work crews. In their spare time, VFV members have opportunities to take part in recreational activities sponsored by such groups as the local 4-H Club, local chapters of

the Future Farmers of America, and churches.

The Extension Farm Labor program is now operating in 2,871 counties, and is already well toward its goal of 3,500,000 Crop Corps members. On July 1 almost 500,000 placements had been made; 400,000 were intrastate, and 90,000 were interstate or foreign. Distribution was about as follows: 147,000 in the 13 Southern States, 132,000 in 12 North Central States, 91,000 in the 11 Western States, and 30,000 in the 12 Northeastern States. An increasingly large demand for farm workers from now on until the end of the harvest season is expected to result in achievement of the goal.

CATHERINE CARMODY,
Bureau of Agricultural Economics.

FARM MACHINE WORK

BECAUSE farm machines constitute a key to the productive ability of American farmers, these machines are important elements in the Nation's wartime food production program.

For years, farmers have been adding more power machines and complementary equipment to their productive facilities. Purchases of tractors and tractor equipment were of record proportion in 1941, and the 1940 and 1942 purchases were also large. These machines have already contributed toward expanding agricultural production and without them a much greater labor force would be needed.

Although only about 1.8 million farmers, or about 30 percent, own tractors, the proportion of total field work performed with tractors greatly exceeds this figure, since the tractor farms are much larger than the average of all farms. Also, many farmers who do not own tractors either hire tractors and tractor equipment, or exchange labor and equipment for tractor work.

In 1939, when there were 25 percent fewer tractors than at the present time, almost 70 percent of the harvesting of

all small grains and more than 55 percent of the plowing and disking of land was done with tractor machines. Then only about 25 percent of the light jobs, such as cultivating, planting of corn and cotton, and mowing was done with tractor machines. The increase in tractor work since 1939 has probably been more marked for light duty jobs than for heavy jobs, because purchases of light duty machines have increased greatly while the increase in numbers of heavy duty machines has about kept pace with the increase in tractor numbers.

The upward trend in numbers of tractors and tractor machines has been temporarily halted in 1943, for production of farm machinery and equipment this year is expected to be not more than 40 percent of 1940 production.

THE tentative program for 1944 calls for at least double the 1943 production. Numbers of tractors and tractor machines available for use in 1944 seem certain to be of record proportions. Most numerous will be the harvest machines, such as combines,

corn pickers, hay loaders, windrow pick-up balers, etc. Production of these important machines was relatively high in 1942 and 1943 and supplies of them on farms in 1944 will be relatively large.

Balanced against the increase in tractors and tractor machines will be a continued decrease in numbers of work animals and animal-drawn machines. The number of work animals in 1944 will not only be the smallest in many years, but a relatively high proportion of the animals will be too old for maximum work. Additional machine power will be needed to offset the loss of animal power and to achieve the necessary production. Additional labor-saving machines will be needed

because the farm labor supply will be small in relation to the job to be done and because the physical capacity of the labor force will be below that of past years.

The spread of tractor power has increased greatly the speed of performing field work. Greater speed has been gained largely by increases in the size of farm power units. Small machines operated with animal power have been replaced with much larger machines operated with tractor power. For example, the sulky plow and the two-horse walking plow have been replaced with tractor gang plows and the one-row riding cultivator has been replaced with tractor cultivators of two-row size and larger. It is, of course, im-

Number, Size, and Amount of Work Performed, Specified Farm Machines, United States

Kind and type of machine	Machines on farms Jan. 1, 1942		Average time used in 1941	Amount of work performed with machines	
				In 10-hour day	Total for 1941
Moldboard plows:	<i>Thousands</i>	<i>Average size</i>	<i>Hours</i>	<i>Acres</i>	<i>Acres</i>
Tractor.....	1,461.2	(¹)	(¹)	8.0	(¹)
Horse riding.....	1,041.0	(¹)	(¹)	2.9	(¹)
1-horse walking.....	2,549.5	(¹)	(¹)	.9	(¹)
Disk plow:					
Tractor.....	166.4	(¹)	(¹)	9.8	(¹)
Horse.....	83.7	(¹)	(¹)	3.9	(¹)
Disk harrows:					
Tractor.....	1,181.4	(¹)	(¹)	21.7	(¹)
Horse.....	1,332.8	(¹)	(¹)	8.1	(¹)
Row crop planters:		<i>Rows</i>			
Tractor.....	204.3	2.5	77	20.8	160
2 horses and more.....	1,705.5	2.0	40	11.5	46
1-horse.....	1,745.6	1.0	50	5.5	28
Mowers:		<i>feet</i>			
Tractor.....	313.6	6.6	78	19.7	154
Horse.....	2,565.0	5.2	63	8.5	54
Grain drills:					
Tractor.....	422.3	10.4	79	25.5	201
Horse.....	1,289.8	7.2	44	10.1	44
Grain binders:					
Tractor.....	366.1	8.6	55	18.2	100
Horse.....	1,018.6	6.9	34	10.8	37
Combines.....	264.3	8.8	125	18.8	235
Corn pickers.....	129.9	<i>Rows</i> 1.6	105	9.6	101
Hay balers:				<i>Tons</i>	<i>Tons</i>
Windrow pick-up.....	25.0	(¹)	176	19.0	834
Stationary power.....	60.6	(¹)	135	18.0	243
Stationary horse.....	62.8	(¹)	80	6.0	48
Cream separators.....	1,748.0	<i>Pounds per hour</i> 633	139	(¹)	(¹)
Milking machines.....	253.1	<i>Units</i> 2.2	684	(¹)	(¹)

¹ Information not available.

The above material was adapted from B. A. E. report F. M. 42 Work Performed with Principal Farm Machines. Data for other machines as well as information concerning variation in use of machines, regional aspects of machine performance and influence of age of machines is available in this report which is based on information obtained from more than 27,000 Crop Correspondents in February 1942.

possible to picture the savings thus effected in farm labor on a particular farm, as there are wide variations in the kinds of animal-drawn equipment originally used and in the size of tractor tools now being used. However, some measure of the savings for the country as a whole can be obtained from table 1. Many farm machines require a one-man crew for their operation. Thus the amount of work performed in the same amount of time, represents for many machines their effectiveness as labor savers. A tractor-moldboard plow on the average does as much per day as can be done with a one-horse walking plow in 9 days or with a horse-drawn riding plow in 3 days.

The data in table 1 relative to machine performance are for the country as a whole. There are wide variations in machine performance in different parts of the country. In the more level areas where the farms are large, the acreage covered or work done per day per machine is much higher than the national average. Most of this difference is due to the use of larger machines, although, according to the size of machine, more work is performed in the Great Plains than in other parts of the country. Rate of performing work with most machines is below average in the States along the Atlantic Seaboard where the fields are of relatively small size, irregular shape, and often of hilly topography.

The amount of work performed with a machine is influenced by the annual use of the machine as well as by the amount of work done in a day. The machines that are used most are the machines used daily, rather frequently throughout the year, or used considerably for custom work. Milking machines and cream separators are commonly used each day of the year, and the annual use of milking machines is much higher than for other farm machines. Annual use of windrow

pick-up balers, combines, and threshers, all of which are used for custom work, is relatively high.

OF COURSE, factors other than power influence the annual use of machines. For all types of machines, annual use declines with increased age. This probably reflects the tendency of the farmers with large acreage to keep their farms equipped with relatively new equipment. When much work is to be performed, newer machines that can be operated with a minimum loss of time are almost essential. With small acreage, older machines can be used, as loss of time for repairs is not so objectionable.

Regional aspects also have a bearing on annual use of machines. For the great bulk of machines, their use is confined to farms on which they are owned. This tendency toward individual ownership of machines is due in part to the fact that farmers are reluctant to rent their machines, especially the more complicated ones, because of risk of damage. At the present time, with machines and parts difficult to obtain, farmers may be even less inclined than usual to rent their machines unless they can obtain in exchange, labor, power, other machine work, or equipment badly needed on their own farms.

In order to hire the use of a machine, a farmer often must hire the operator as well. Farmers who depend on hired machines often lag in their farming operations. For most crops there is a right time to plant and a right time to harvest. The proper timing of farm work can contribute toward war demands for increased food production. The great bulk of American farmers are apparently of the opinion that proper timing is best assured when they have under their direct control the labor, the power, and the tools with which to do the job.

A. P. BRODELL,
Bureau of Agricultural Economics.

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1935-39=100) ²	Cost of living (1935-39=100) ³	1910-14= 100					Prices paid, interest and taxes ⁵	Farm wage rates
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in—					
					Living	Production	Living and production			
1925.....	90	126	125	151	163	147	156	109	176	
1926.....	96	131	126	146	162	146	155	168	179	
1927.....	95	127	124	139	160	144	153	166	179	
1928.....	99	126	123	141	160	148	155	168	179	
1929.....	110	134	122	139	159	147	154	167	180	
1930.....	91	110	119	126	150	141	146	160	167	
1931.....	75	84	109	107	128	123	126	142	130	
1932.....	58	58	98	95	108	109	108	124	96	
1933.....	69	61	92	96	108	108	108	120	85	
1934.....	75	76	96	109	122	123	122	129	95	
1935.....	87	86	98	117	124	127	125	130	103	
1936.....	103	100	99	118	123	125	124	128	111	
1937.....	113	117	103	126	128	136	131	134	126	
1938.....	89	91	101	115	122	125	123	127	125	
1939.....	108	105	99	113	120	122	121	125	123	
1940.....	123	119	100	115	121	124	122	126	126	
1941.....	156	169	105	127	131	131	131	133	154	
1942.....	181	238	116	144	154	149	152	151	201	
1942—May.....	174	⁵ 227	116	144	153	150	152	151	183	
1942—June.....	176	234	116	144	154	150	152	151	202	
1942—July.....	178	⁶ 240	117	144	⁶ 155	150	⁵ 153	152	163	
1943—May.....	203	302	125	152	⁵ 170	162	⁵ 167	164	251	
1943—June.....	201	305	125	152	⁵ 171	⁵ 163	⁴ 168	164	165	
1943—July.....			124		172	164	169			

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio, prices received to prices paid, interest and taxes ⁴
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	128	144	121	140	155	144	139	84
1928.....	130	152	176	159	151	168	153	149	89
1929.....	120	144	141	149	156	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	61
1932.....	44	47	82	102	63	83	82	65	52
1933.....	62	64	74	105	80	82	75	70	59
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	144	131	122	122	92
1942.....	119	155	125	199	189	152	151	157	104
1942—May.....	120	159	131	152	189	143	134	152	101
1942—June.....	116	153	148	169	191	141	137	151	100
1942—July.....	115	155	131	200	193	144	145	154	101
1943—May.....	148	167	212	253	214	179	175	187	115
1943—June.....	151	166	234	308	211	178	179	190	116
1943—July.....	154	163	230	315	206	178	183	188	114

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised March 1943.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

THE AGRICULTURAL • SITUATION •

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A Brief Summary of Economic Conditions

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FARM people, anticipating in 1943 the largest cash income in their history, are being urged by national and local leaders and the U. S. Treasury to invest heavily this fall in War Bonds and thus do an extra share to speed the war's end. As around 45 percent of the farmers' cash in 1943 will be obtained in the last 4 months of the year this appeal has genuine timeliness. Farmers, already investors in War Bonds to the tune of around 1 billion dollars, are asked to swell this total as much as possible by the end of the harvesting season. War Bond purchases, for that matter, hold special attraction to farmer investors in addition to their fundamental appeal to patriotism. War Bonds meet every requirement for safety and for liquidity. They are an ideal means for storing up extra purchasing power at a time when money is relatively plentiful for a great number of farmers but purchases are strictly limited, against the time when more goods become available and the purchasing power will be needed. Many farmers also are reported making War Bond purchases on a regularly budgeted basis to provide for post-war improvements of their farms which cannot be made during wartime because of scarcity of materials and labor, and others are buying bonds to build up educational funds for their children.

Commodity Reviews

INCOME: Rise

CASH income from farm marketings during the period January to June 1943 rose to 7,802 million dollars, an increase of 35 percent over that for the first half of 1942. Crop marketings were 45 percent higher and live stock marketings were 31 percent higher than in corresponding period of 1942. Government payments totaled 400 million dollars for the first 6 months in 1943, compared with 431 million dollars in those months of 1942.

With favorable growing conditions reported quite general over the country during the past few weeks, income from crops this year may be somewhat larger than last year. Income from livestock in 1943 probably will be considerably greater than in 1942. Gross farm income in 1943 may be as much as 20 percent above 1942. The increase in production expenses probably will be little more than half as great. Possibility of a 25 to 30 percent increase in net income of farm operators appears indicated.

PRICES: Decreases

DECREASES in prices for agricultural products during July and August more than offset a slight rise in the prices of other commodities. Most of the decline in wholesale prices of agricultural commodities in the past 2 months has been seasonal.

The livestock-feed situation now dominates the outlook for wholesale prices of farm commodities. Effective July 31 the Office of Price Administration set price ceilings for 1943 crop oilmeals at levels \$2 to \$11.50 per ton higher than for 1942 crop oilmeals. These advances will be reflected in higher prices for mixed feeds. Revisions in ceiling prices for oilmeals followed announcement of a support price for 1943 crop cottonseed about \$6 per ton higher than last year.

The OPA on August 20 announced

revised ceiling prices for flour. It was pointed out by OPA that some sort of subsidy probably would need to be paid in order to prevent a rise in the price of bread.

DAIRY PRODUCTS: Set Aside

IN ACCORDANCE with its policy of adjusting to seasonal production the percentage of dairy products reserved for Government purchase, the War Food Administration has decreased the percentage of cheese and butter to be set aside by manufacturers. The new percentages to be set aside are 60 and 30 percent, respectively, in August; 60 and 20 percent respectively in September, and 50 and zero percent respectively in October. With the new percentages, amounts left for civilian consumption will be in line with the yearly allocation under the rationing programs.

Butter for civilian consumption continued short of demand under the ration program during August, with most stores in the East limiting their sales. To assist in adjusting demand to the limited supply, the point value for butter was raised from 8 points per pound to 10 points effective August 1 and from 10 points to 12 points effective September 5. Supplies of Cheddar cheese were acutely short on most markets and of brick and foreign types were somewhat short. Supplies of soft types of cheese appeared ample to meet the demand under the ration program.

Commercial stocks of evaporated milk have been growing rapidly. Total butter stocks, including Government stocks and those set aside for Government purchase, also have been increasing and on August 1 were at a record level. Stocks of cheese have been increasing by more than the usual seasonal amount but continue below last year's level. These stocks will be needed to fill essential requirements during the winter.

FATS, OILS: Outlook

WITH August 1 indications pointing to a crop of nearly 3 billion pounds of peanuts picked and threshed this year, compared with about 2.2 billion pounds in 1942, the outlook for vegetable oil production is favorable. Production of cottonseed in 1943 may be but little less than in 1942, with the decrease in cotton acreage being offset to some extent by an increase in yield per acre. Harvest of soybeans for beans is not expected to be much different from last year's. Flaxseed production is forecast at 54.3 million bushels, nearly 14 million bushels more than in 1942. If these prospects materialize and if utilization of the crops for purposes other than crushing does not increase materially over 1942-43, output of oil from peanuts, cottonseed, soybeans, and flaxseed harvested in 1943 may surpass by more than 15 percent the 3,450 million pounds produced in 1942-43.

Production of fats and oils from domestic materials, including farm butter and uninspected lard, totaled roughly 5,230 million pounds, in the first 6 months of 1943, compared with 4,760 million pounds a year earlier. Production of inedible tallow and greases, decreased by 110 million pounds and there were increases of 345 and 149 million pounds, respectively, in output of soybean oil and lard. Total production of fats and oils from domestic materials this year may be around 10.7 billion pounds, compared with 9.9 billion pounds last year.

Basic features of the 1943-44 oilseed crushing program were announced by the War Food Administration and the Office of Price Administration in late July and early August. Support prices for cottonseed will be \$55 and \$56 per ton for basis-grade seed f. o. b. gin, \$6 per ton higher than in 1942-43. Commodity Credit Corporation will buy on request, at or near ceiling prices, any cottonseed oil, meal, or linters produced by mills paying sup-

port prices for cottonseed. Detailed schedules of prices for farmers' stock peanuts have been announced. Cleaners and shellers will be charged higher prices than those paid to farmers, but crushers will be charged lower prices. Maximum prices for oil meals were advanced effective July 31. Increased prices for meal, together with higher prices for linseed oil than prevailed a year ago, will about compensate crushers for higher prices of oilseeds in 1943-44.

POULTRY AND EGGS

FARM marketings of chickens have been increasing in recent weeks, with supplies in most markets about enough to meet demand at ceiling prices. In several instances prices of inferior quality birds have been a little less than the maximums established by the OPA. Although receipts of dressed chickens have been much larger than they were a few weeks ago, they are somewhat smaller than a year ago.

Preliminary estimates indicate that 926 million chickens are being raised on farms this year, 16.5 percent more than in 1942. Hatchery production, mostly for commercial broilers, apparently is being maintained at a record level.

Marketings of chickens in the rest of the year will be considerably larger than last year.

Egg production in July was 11 percent above the previous record for that month in 1942, but about one-third smaller than the April output, the seasonal peak for the year. In recent weeks the demand for some eggs has been exceeding market supplies at ceiling prices by an increasing degree, even though such prices are increased periodically. Egg production will decline seasonally until November, but probably will continue larger than a year earlier through the remainder of 1943.

On the basis of average relationships, an increase of 8 to 10 percent

in number of layers on January 1, 1944, would be expected to follow the increase in chickens raised this year. The number of potential layers that farmers keep for 1944 will be influenced by the outcome of this year's feed crops and by any additional Governmental action with respect to prices and supplies of feeds and the timing of any such action.

LIVESTOCK: Outlook

Hog slaughter for the rest of the year probably will continue to be larger than in the corresponding months of 1942 because of the record spring pig crop produced this year. The lamb crop is estimated at 31.1 million head, 5 percent smaller than last year. Reduction in the lamb crop of the Western States was attributed to shortage of skilled labor at lambing time and to a lack of ammunition for use against coyotes. In the native States the lambs saved per 100 ewes were down from 99.0 last year to 96.0 this year. Slaughter of sheep and lambs under Federal inspection has shown a sharp increase. Most of this increased slaughter was sheep, with little change in the slaughter of lambs and yearlings. Because of the smaller lamb crop it now appears that although slaughter during the rest of the year will be heavy, it won't approach last year's record. Cattle and calf slaughter under Federal inspection is still unusually low compared with numbers on farms.

FEED GRAINS: Supply

THE feed grain supply for 1943-44 probably will total about 144 million tons, a gain of 7 million tons over that indicated on July 1. This is 10 million tons smaller than the 1942 record supply, but 23 million tons larger than the 1937-41 average. The indicated increase results largely from favorable growing conditions in the Corn Belt, causing an increase of 168 million bushels in the indicated size of

the corn crop. Indicated production of all hay is 99 million tons, 6 percent less than the record production in 1942. The 1943-44 supply of feed grains per grain-consuming animal unit probably will be about 15 percent less than a year ago, and the hay supply per animal about 5 to 10 percent less.

Ceiling prices of oilmeals and cakes produced from the 1943 oil seed crops have been raised to bring a more nearly normal relationship between prices of oilmeals and prices of other feeds and livestock products. In response to increased ceilings, prices of soybean meal at Chicago and cottonseed meal at Memphis have risen substantially.

Demand for feed wheat has continued strong, with sales running 8 to 15 million bushels per week since they were resumed July 13. Wheat owned by Commodity Credit Corporation on July 31, 1943, totaled 176 million bushels. Receipts of corn at primary markets increased to a considerable extent in August. Although nearly all prices with ceilings remained at top levels, oats, barley, and grain sorghum prices, not yet covered by ceilings, advanced during the past month. The greatest increase in recent weeks has been in grain sorghum prices.

WHEAT: Production

THE indicated wheat crop of 835 million bushels is 44 million bushels above the indication of a month earlier and 96 million bushels above the 1932-41 average. The total indicated on August 1, however, is 146 million bushels less than last year's large crop. Winter wheat production was estimated at 534 million bushels and spring wheat at 301 million bushels, which compares with 703 and 278 million bushels respectively, for 1942. Production of all classes of wheat, except hard red spring wheat, will be below that of last year. The supply of soft red winter wheat is again below ordinary milling requirements. Pro-

duction of this class of wheat is estimated at 16 percent less than last year and 33 percent under the 1932-41 average.

With the carry-over of old wheat on July 1 at 618 million bushels, the total domestic supply of wheat without imports is indicated at 1,453 million bushels for the year ahead. Disappearance of domestic wheat in 1943-44 probably will be about 1.2 billion bushels. This disappearance, in millions of bushels, will be distributed about as follows: food, 535; seed, 80; alcohol, 125; feed, 425; and exports and shipments, 40. How much wheat will be used in alcohol production will depend largely upon how much molasses can be used for this purpose. Feed of 425 million bushels assumes that 120 million bushels will be fed on farms where grown, with 65 millions fed that were purchased from the Commodity Credit Corporation prior to July 1 but not fed until afterwards, sales of 215 million owned by the Commodity Credit Corporation on July 1 and perhaps 25 million bushels purchased by CCC in domestic and foreign markets. Carry-over on June 30 next year probably will total about 250 million bushels.

TRUCK CROPS: Supply

SUPPLY of commercial truck crops for fresh market during the next few weeks is expected to continue smaller than in 1942. Lack of moisture and continuance of hot weather have reduced yields in many truck crop areas, particularly in the Middle Atlantic States. Increases in crops of snap beans, beets, cabbages, carrots, eggplants, and tomatoes, probably will be more than offset by decreases in the crops of lima beans, cauliflower, corn, lettuce, onions, spinach, and peppers, and much smaller crops of celery, cucumbers, cantaloups and watermelons. Although in shorter supply than a year ago, lima beans, cauliflower, celery, onions, and peppers

should be more plentiful during the next few weeks than in the early summer.

Tonnage of truck crops for processing probably will not vary greatly from that of last year. Indicated production this season, compared with last, is up 11 percent for snap beans; 7 percent for green peas, and 4 percent for sweet corn. The tomato crop for processing may be about 2 percent smaller than in 1942. An increase is indicated for beets and no change for spinach, but the tonnage of cabbage for kraut, cucumbers for pickles, lima beans, and pimientos is expected to be smaller than last year's.

FRUITS: Production

PRODUCTION of deciduous tree-fruit and grapes this year is expected to be about 17 percent smaller than in 1942 and 12 percent below the 10-year (1932-41) average. Prospects are for prune and grape crops 12 percent and 11 percent larger respectively than in 1942. August 1 conditions indicate the fig crop will be about the same as last year's. All other deciduous fruit crops probably will be much smaller than last season. The commercial apple crop is indicated to be only 72 percent as large as last year, with production in all important apple States except California expected to be smaller than last season and the crop in the South Atlantic States only about half that of a year ago. The greatest relative decrease is expected in the Delicious variety, and Wealthys are the only variety with a larger indicated production than last season. Peach, pear, and cherry production is indicated to be 36 percent, 22 percent, and 37 percent smaller, respectively, than in 1942.

Citrus production, on the other hand, may be about as large in 1943-44 as in 1942-43. Conditions this year, compared with a year ago, are more favorable for California oranges, grapefruit, and lemons, but less favorable

for Florida oranges and Florida and Texas grapefruit. If conditions for citrus production continue favorable, the total fruit supply in the 1943-44 season, citrus and deciduous, will be about 11 percent smaller than in 1942-43.

POTATOES: Prospects

THE prospective potato crop of approximately 443.1 million bushels indicated August 1 is 19 percent larger than last year's crop and 2 percent larger than indicated a month earlier. Prospects have improved somewhat in the Eastern and Central surplus late potato States, but have become slightly less favorable in Idaho, Nebraska, Ohio, Illinois, and some of the minor potato-producing States. Indicated average yield in 1943 for the United States as a whole is 131.7 bushels per acre, or 5.2 bushels less than in 1942.

Potato prices continue below the

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products ¹
1942			
January.....	145	145	103
February.....	145	147	99
March.....	146	150	97
April.....	150	150	100
May.....	152	151	101
June.....	151	151	100
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	169	154	110
November.....	169	155	109
December.....	178	150	114
1943			
January.....	182	157	116
February.....	178	159	112
March.....	182	160	114
April.....	185	162	114
May.....	187	163	115
June.....	190	164	116
July.....	188	165	114
August.....	193	165	117

¹ Ratio of prices received to prices paid, interest, and taxes.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State.]

	5-year average		August 1942	July 1943	August 1943	Parity price August 1913
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....	dollars... .884	.837	.954	1.26	1.27	1.46
Corn (bushel).....	do... .642	.691	.834	1.08	1.09	1.06
Oats (bushel).....	do... .309	.340	.426	.656	.652	.658
Rice (bushel).....	do... .813	.742	1.65	1.77	1.63	1.34
Cotton (pound).....	cents... 12.4	10.29	18.03	19.60	19.81	20.46
Potatoes (bushel).....	dollars... .697	.717	1.137	1.67	1.59	1.19
Hay (ton).....	do... 11.87	8.87	8.89	11.90	12.20	19.60
Soybeans (bushel).....	do... 2.96	.954	1.58	1.70	1.68	1.58
Peanuts (pound).....	cents... 4.8	3.55	5.99	7.15	7.17	7.92
Apples (bushel).....	dollars... .96	.90	1.16	2.65	2.16	1.58
Oranges, on tree, per box.....	do... 1.81	1.11	1.80	2.74	2.75	1.92
Hogs (hundredweight).....	do... 7.27	8.38	14.12	13.20	13.70	12.00
Beef cattle (hundredweight).....	do... 5.42	6.56	11.08	12.60	12.30	8.94
Veal calves (hundredweight).....	do... 6.75	7.80	12.74	13.90	13.70	11.10
Lambs (hundredweight).....	do... 5.88	7.79	12.05	13.30	12.80	9.70
Butterfat (pound).....	cents... 26.3	29.1	40.7	49.2	49.8	41.3
Milk, wholesale (100 pound).....	dollars... 1.60	1.81	2.53	3.07	3.13	2.59
Chickens (pound).....	cents... 11.4	14.9	19.6	25.3	25.6	18.8
Eggs (dozen).....	do... 21.5	21.7	32.2	36.3	38.8	34.8
Wool (pound).....	do... 18.3	23.8	39.9	41.5	41.2	30.2
Tobacco:						
Flue-cured, type 11-14.....	cents... 22.9		33.7		37.2	30.9
Maryland, type 32.....	cents... 22.9	17.6	20.5	59.0	60.0	24.3

¹ Revised.

² Comparable base price, Aug. 1909-July 1914.

³ Comparable base price, August 1919-July 1929.

⁴ Adjusted for seasonality.

⁵ Preliminary.

⁶ 5-season average, 1934-38.

⁷ Base price crop years 1919-28.

ceilings, with some sales being made to the Government at support prices. Government purchases totaled 6,614 cars through August 7. As of that date, the War Food Administration reports about 420 cars of these purchases had been sold through normal market channels. About 5,300 cars had been diverted to processors and to state institutions; and it was planned to divert the remainder similarly.

A sweetpotato crop of approximately 81.3 million bushels is indicated. This total would be 24 percent larger than last year's and 17 percent above the 10-year (1932-41) average. Prospective production is about 2 percent smaller than was indicated a month ago, primarily because of less favorable conditions in Maryland, Virginia, North Carolina, Tennessee, Mississippi, Arkansas, Oklahoma, and Texas. Shipments of new sweetpotatoes from Florida, Alabama, and Louisiana have reached large volume. Prices have declined materially from the June peak, but remain far above those of a year ago.

COTTON: Yield

WITH the 10-year-average acreage abandonment, cotton production this season is estimated at 12,558,000 bales of 500 lbs. gross weight, or 4.8 percent above the 1938-42 average. The estimated crop is equivalent to about 12.2 million running bales. Although the cotton acreage in cultivation this year is 9.1 percent under the 1938-42 average and the smallest since 1894, prospective yield is 279.4 lbs. This yield is 14 percent above the 1938-42 average, the highest on record, and nearly 7 pounds per acre above the previous record of last season.

The 1943 Government loan rate has been announced at 19.26 cents per pound, gross weight, for middling $1\frac{5}{16}$ " cotton. This compares with rates of 17.22 cents in 1942 and 14.22 cents in 1941.

DRY BEANS: Record

A RECORD crop of approximately 22.8 million bags of dry edible beans is in prospect for 1943—a crop 16 percent larger than in 1942 and 59 percent larger than the 10-year (1932-41) average. The 1943 planted acreage is almost one-third larger than last season's, but the indicated yield this year is 899 pounds per acre, or 96 pounds less than the high yield of 1942. Prices for dry beans continue at ceiling levels.

TURKEYS: Sales Order

WAR Food Administration on August 18 ordered all further sales of turkeys to civilians to stop after August 21 until the armed forces' request for 10 million pounds of turkeys for overseas shipment is met.

This restriction was issued as an amendment to Food Distribution Order 71 which became effective August 2. The original order prohibited the sale, purchase, or processing of live or dressed turkeys, except as authorized by designated Governmental agencies, but did not apply to turkeys in storage before August 2.

About the same number of turkeys will be raised this year as last—33,069,000 birds, or 3 percent less than the record crop of 1940, but 22 percent above the 5-year (1935-39) average, according to preliminary estimates.

ACP PAYMENTS

WAR Food Administration has announced a revised scale for payments to farmers under the 1943 agricultural conservation program in order to adjust available conservation funds to the increased participation in the program.

The revised rates of payments (with former rates in parentheses) are:

Cotton, one cent per pound (1.1 cents); corn, 3 cents per bushel (3.6 cents); and wheat, 8.5 cents per bushel (9.2 cents). The rates of payment remain unchanged for rice and for the

various types of tobacco included in the program. The rates for computing payments earned by carrying out approved production practices also are unchanged from the schedules previously announced. Payments for cotton, corn, wheat, rice, and tobacco are made on normal production of the allotted acreage.

PARITY PAYMENTS

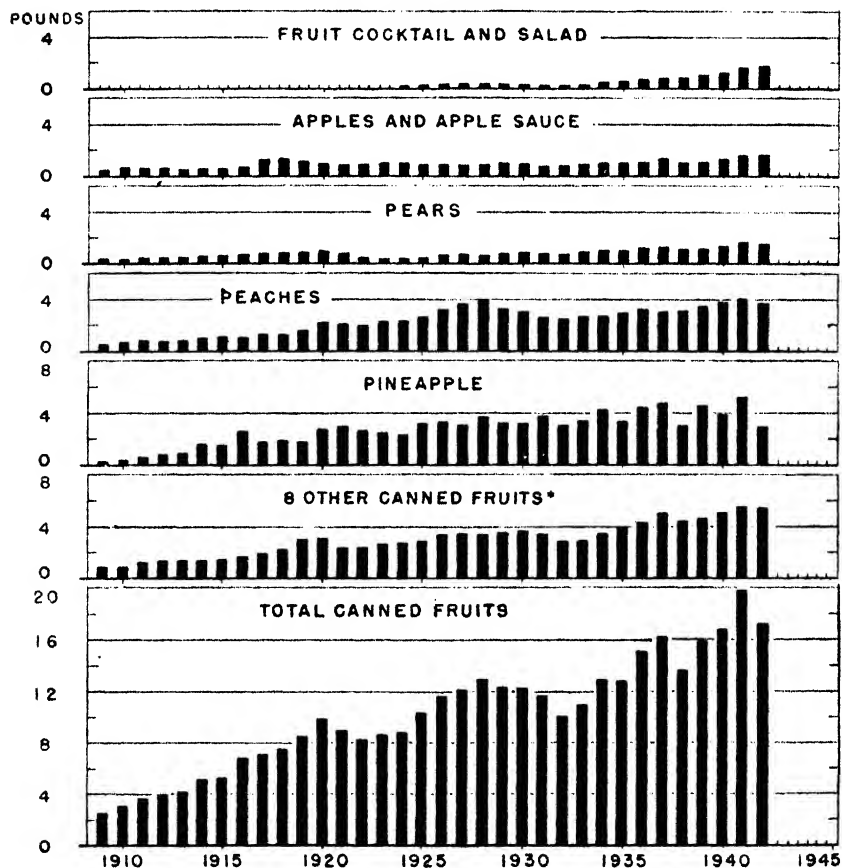
PARITY payment rates applying to the 1942 crops of corn grown in the commercial corn area, wheat, and types 41-44, 46, and 51-55 of cigar-filler and cigar-binder tobacco have been an-

nounced by War Food Administration.

The 1942 crop parity payment rate to corn producers in the commercial corn area will be 7.2 cents per bushel; farmers growing cigar-filler tobacco type 41 will receive .2 cent per pound; producers of cigar-filler and binder types 42-44, 46, and 51-55 will receive one cent per pound; and wheat farmers will receive 13.7 cents per bushel. With these payments, the return of farmers from these crops will equal parity prices.

In announcing the payment rates on the three crops, WFA reported that parity payments will not be made on the other basic crops.

**CANNED FRUITS: CIVILIAN PER CAPITA CONSUMPTION,
UNITED STATES, 1909-42**
(NET CANNED WEIGHT)



*APRICOTS, BERRIES, CHERRIES, CRANBERRIES, FIGS, OLIVES, PLUMS AND PRUNES, AND GRAPEFRUIT SEGMENTS

FARM WAGE RATES

IN VIEW of the rapid rise of farm wage rates during the past year or two, present and past relationships between farm wage rates and the factors normally determining the farm wage rate level should be analyzed. In the second quarter of 1943 the farm wage rate index reached and exceeded the record high for the past 33 years, established during 1920 following the World War I boom period. From an index value of 129 percent of the 1910-14 average in July 1940, farm wage rates jumped to an index of 202 by July 1, 1942, and to 274 on July 1, 1943. An increase of 112 percent in 3 years is indeed a phenomenal one.

Of the various factors associated with farm wage rate changes, farm income is the most important. It is important not only because it determines the farmers' ability to pay a given wage rate, but also because it is closely correlated with other important factors making for wage rate changes, such as the level of wages and earnings of industrial workers, the level of industrial activity and employment, and thus with the available labor supply. Historically, changes in farm wage rates have followed fairly closely the changes in farm income on a gross or on a net basis, as will be noted from the accompanying chart for the 1910-42 period. Although the relationship is not uniform throughout this period, approximately 90 percent of the yearly variation in farm wage rates is explainable in terms of changes in gross cash farm income. The average relationship between wage rates and net farm income is almost as close. The slightly higher association between wage rates and gross cash farm income probably reflects farmers' greater awareness of gross cash receipts than of net income. In recent years, however, there has been a tendency for farm wage rates to move in closer relationship with net farm income than formerly.

WHAT the "normal" relationship is between wage rates and farm income cannot easily be determined. Farm wage rates tend to lag behind farm income changes, both on the upswing and the downswing of income conditions. They lagged behind the sharp upswing of farm income during 1915-19, years of the first World War, but did not start to decline until a year after the 1919 peak in income was passed. From 1921 to 1929 farm wage rates moved in close association with cash farm income, but remained at a relatively higher level than net farm income even through the depression years of 1930-32. From the depression low, farm wage rates did not begin to rise until 1934, whereas farm income started rising in 1933. From 1933 to 1937, and again from 1940 to 1942, farm wage rates did not increase as fast or as much as farm income, the lag being more noticeable in relation to gross cash income than to net farm income.

If the average relationship between wage rates and farm income (either on a gross or net basis) prevailing during the whole 33-year period for which the information is available is taken to be the "normal," and if an allowance is made for the usual time difference of about 6 months between changes in income and the response in wage rates, it may be seen that farm wage rates in 1942 were still somewhat below the level suggested by the income relationship alone (lower section of the accompanying chart).¹

Other factors in addition to farm income, of course, have some influence

¹ Comparisons on a concurrent year basis between farm wage and farm income changes during a period of accelerated income increase tend to exaggerate the divergence between farm wage and income index levels. Actually farm wage rates cannot be expected to show an immediate response to farm income changes since farm wage rate commitments in any year are in large part entered into prior to the realization of income from that year's production, and may in part be paid out of the preceding year's income.

in determining the wage rate level during any given year. These factors include the cumulative effects on the labor supply demand ratio of industrial employment and the amount of farm-to-city migration on the one hand, and the degree of progress in mechanization of farming operations on the other. Allowing for labor supply changes as reported by farmers and for the trend in mechanization since 1919, it appears that farm wage rates in 1941, 1942, and so far in 1943 are at approximately the levels expected on the basis of average long-time relationships.

ALTERNATING patterns of agricultural prosperity and depression have been accompanied by varying degrees of disparity between farm income and farm wage rates, sometimes favoring agricultural wage workers, as in most of the twenties, and sometimes favoring farm operators, as in the middle thirties. The period 1910-14 is generally considered as one in which there was a fair balance in income position of farmers relative to that of other groups in the economy, and the reestablishment of a corresponding balance has long been the objective of farm price and income policies. It is of interest, therefore, to observe that the 1942 farm wage rate level was still about 4 percent under that which would have been reached if the 1910-14 ratio of farm wage rates to total *net* farm income had prevailed in 1942, even after an allowance is made for the normal lag between wage rates and net farm income. Similarly, the 1942 farm wage rates were about 15 percent under the wage level which would have been reached if the 1924-29 ratio of wage rates to net farm income had held. The actual average farm wage rate in 1942 for the United States was approximately equal to the wage indicated by the 1935-39 ratio of wage rates to total net farm income, when farm wages were depressed by large rural and urban

unemployment and by the restricted outmigration of farm people during the depression years. However, one additional fact needs to be kept in mind—namely, the decrease in farm population and in farm workers which has occurred since 1910. Net farm income per capita or per person engaged in agriculture has therefore increased in recent years relatively more than the increase in total net farm income. Ratios of wage rates to net farm income per worker which held in 1910-14, 1924-29, or 1935-39 when applied to the average net farm income per agricultural worker in 1941-42 consistently yield wage rates higher than those paid in 1942. The prevailing 1942 wage level was approximately 20 percent under the wage rates suggested by the 1910-14 ratio of wages to net income per farm worker and about 4 to 7 percent under that suggested by the 1935-39 ratio.

DESPITE the sharply rising level of farm wage rates during 1943, it is doubtful whether the average wage rates for this year will exceed the levels suggested by the 1935-39 ratio of farm wage rates to *total* net income or will reach the level suggested by the 1910-14 ratio.

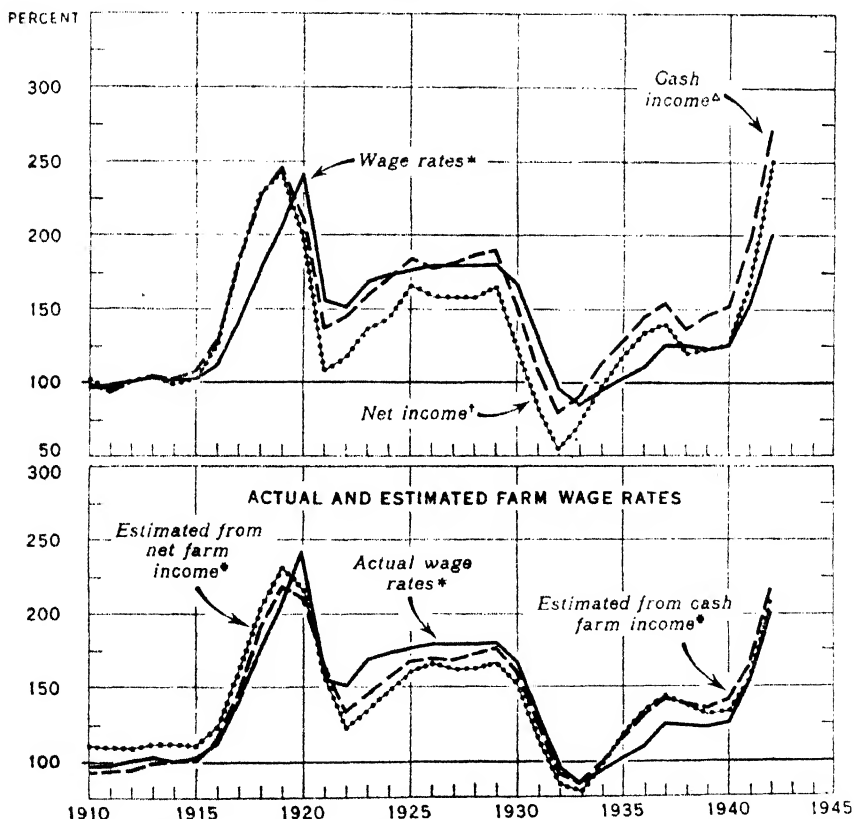
The prospective 1943 annual average farm wage for the country as a whole will probably fall considerably short of reestablishing the 1910-14 ratio of wage rates to net farm income per worker, and is not likely to reach the wage level indicated by the 1935-39 ratio. Farm wage rates in 1943 would have to average approximately 70 or 77 percent higher than in 1942 to reach the 1910-14 ratios of wages to net income per farm worker (family and hired) or per family worker, respectively. The corresponding 1935-39 ratios would require an increase in the annual average wage rates of 45 to 50 percent from 1942 to 1943. From July 1, 1942, to July 1, 1943, farm wage rates have increased by 36 percent.

Current and past trends in farm wage rates in the various major geographic divisions of the country have followed a pattern with respect to farm income which in general outline is similar to the national picture. The available farm income data are more limited for States and geographic divisions than for the country as a whole. Income figures are available only since 1924 and are limited to gross cash income. In each of the 9 geographic divisions of the country, the 1942 wage rate level reflected the improvement in the total gross cash farm income situation. In the New

England and Western States, farm wage rates in 1942 were at a level consistent with the historical wage gross-income relationship, although if allowance is made for the possible total net farm income situation on the basis of United States indications, wage rates in these divisions may have been at a slightly higher level than is suggested by income considerations alone. This is due, no doubt, to a relatively more difficult labor supply situation in these areas of rapid industrial employment expansion and consequently heavy outmigration from the farm population and heavier shifts of farm

FARM WAGE RATES, CASH FARM INCOME, AND NET FARM INCOME TO PERSONS ENGAGED IN AGRICULTURE, UNITED STATES, 1910-42

INDEX NUMBERS (1910-14=100)



* REPORTED BY CROP CORRESPONDENTS

▲ INCOME FROM SALES OF FARM PRODUCTS, INCLUDING GOVERNMENT PAYMENTS

† GROSS FARM INCOME LESS ALL PRODUCTION COSTS EXCEPT FOR WAGES AND FOR RENT PAID TO LANDLORDS LIVING ON FARMS

* ESTIMATED FROM LINEAR RELATIONSHIP OF FARM WAGE RATES TO AVERAGE OF CURRENT AND PRECEDING YEAR'S FARM INCOME

workers to nonagricultural occupations. In the Middle Atlantic and West North Central States, wage rates in 1942 appear to have been at a somewhat lower level than expected on the basis of 1924-42 relationships with farm income. In the South Atlantic, East South Central, and East North Central States, wage rates were at a materially lower than expected level. The lower than expected wage level in the South Atlantic and East South Central Divisions undoubtedly reflects existence of a relatively plentiful labor supply, as compared with that in the northern and western sections of the country.

EXAMINATION of the historical trends of wage rates and cash farm income in the several geographic divisions reveals some important differences. In the West North Central States, for example, farm wage rate variations from year to year have generally followed very closely the annual changes in cash farm income through the 1924-42 period, when allowance is made for a half year lag in wage rates. In the Middle Atlantic States farm wage rates tended to be at a higher level relative to farm income during 1924-29 and at a materially lower level throughout the 1935-40 period. A similar disparity between income and wage rates in these two periods also prevailed in the New England, East North Central, and Pacific States. In the South Atlantic and East South Central States wage rates likewise moved above the income level in 1924-29 and below the income level in 1935-40, but to a far greater degree than in other parts of the country. In 1941 and 1942 wage rates tended to move in closer relationship with income in all of the major geographic divisions.

A possible explanation for the higher farm wage level in relation to farm income during 1924-29 may be found in the sustained high level of employment and wage rates in in-

dustry along with the cumulative effects of heavy outmigration from farms during the 1920 decade. A scarce farm labor supply and relatively high industrial wage rates thus tended to sustain the farm wage rate level during these years. During most of the 1930's the opposite situation prevailed, when large unemployment and a slackened migration tended to depress farm wage rates. In addition, mechanization of farming operations had advanced to a point which relative to earlier decades had reduced the demand for farm labor, thus in effect aggravating the surplus labor supply situation. The relative intensities with which all of these factors operated in the various geographic divisions produced differences in the degree of wage income disparities. In the West North Central States, for example, where the departure of wage rates from income was least in the two periods, net migration from farms declined considerably less between the 1920's and the 1930's than in an area like the South Atlantic, where the wage disparities were greatest.

WITH some exceptions during certain years, the relative changes over time in the farm wage rate indexes for the United States and major geographic divisions have been shown to have a fairly consistent relationship with relative changes in income. To know merely the rates of change in wage levels which differ markedly in absolute values does not throw light on reasons for the actual differences in wage rates in the various States of the country. On July 1 of this year the average monthly wage rate with board varied from \$25 in South Carolina to \$116 in California, while the average day rate without board ranged from \$1.50 in South Carolina to \$6.80 in Washington. In July 1942 the weighted average monthly wage of day and month hands varied from a low of \$23 in South Carolina to a high of \$89

in California. There is thus nearly as much of a spread in the wage rates of States at a given time as there is in the farm wage rate level of the country for the past 77 years of recorded wage rate information.

The reasons for such marked differences in farm wage rates among States are manifold and not entirely measurable on the basis of available quantitative information. Nevertheless, considerable light is thrown on existing differences by examining the more important factors associated with them. State differences in income from agricultural production per worker, in the competitive wage rate levels of nonagricultural occupations, in the labor supply on farms, and in the degree of dependence upon hired farm workers are some of the important factors. By relating available measures of these factors to the July 1942 composite farm wage rates, more than 80 percent of the State variation in wage rates can be explained in terms of them.¹ If more adequate statistical data were available for measuring the labor supply factor, and the competitive nonagricultural wage factor, it is probable that a still fuller explanation of farm wage variation among States would be obtained. Under the conditions prevailing in July 1942 State differences in the available labor supply per farm had the largest net influence on State differentials in wage rates, and the prevailing wage rate for common labor in industry the next largest, with farm income per worker and the proportion hired workers comprise of total workers also having important influence. Under more plentiful labor supply conditions than those

prevailing in July 1942, State variations in the agricultural income and industrial wage factors would have greater influence on State differences in farm wage rates.

IN VIEW of the fact that South Carolina has the largest potential labor supply per farm, the lowest cash farm income per agricultural worker, and ties with two other States for the lowest common labor wage rate in industry, it is not difficult to understand why it has the lowest farm wage rate of any State in the country. In the Pacific States, especially in California, the high agricultural income per worker, high level of competitive wage rates in industry, and high degree of dependence on hired workers all combine to produce the highest farm wage rate levels among the States.

The supply of labor actually or potentially available for farm work or for nonagricultural work thus has under present conditions a very important effect directly or indirectly on farm wage rates. In some States the existing wage rate level is depressed by a relatively large labor supply. On the other hand, in some States the scarcity of labor available for farm work, together with unusually high industrial wage rates, has tended to produce a farm wage rate level somewhat higher than would be expected on the basis of farm income considerations alone. The fact remains that farm wage rates for the country as a whole during 1942 and those probable for 1943 are still comparable with a wage level indicated by the 1935-39 ratio of wages to net farm income. This suggests that in some States and areas of the country farm wage rates could advance in the direction of establishing a more favorable wage relationship to income than existed in the 1935-39 period, when wage rates were low relative to the farm income level.

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¹ Based on a multiple correlation analysis of July 1, 1942 composite farm wage rates with the following factors: (1) Cash farm income (including government payments) per farm worker in 1941; (2) hourly entrance wage rates of common labor in industry, July 1942; (3) rural-farm persons 14 years of age and over not employed in nonagriculture, per farm, April 1940; (4) proportion hired workers comprise of total farm employment, June 1, 1942.

LAND VALUE BENCHMARKS

FOR the first time since 1931, the Bureau of Agricultural Economics index of farm real estate values is now above the pre-World War I level. Farm real estate values in the United States as a whole during the 4 months ending July 1 rose from 99 percent of the 1912-14 average to 102 percent of the average. This marked the second time in 3 decades that the index has crossed 100.

Over this stretch of 30 years, values have been within 10 percent of the base average in only 3 short periods, covering a total of but 5 years. Each of these brief periods was characterized by rapidly changing economic conditions and unstable land value levels. The first of these periods was 1915 and 1916. At that time, land values were still within 10 percent of the base, although the economic impacts of World War I were being felt to an increasing degree and values were about to start on the course that culminated in the 1919-20 land boom. The next time values were inside this range was in March 1931, as they slid into the great depression. At present, under the stimulus of war, the land value index for the country as a whole has climbed back again to the 1912-14 level. In several individual States, of course, land values through the years have remained continuously above pre-World War I averages; in others, values are still far below the 1912-14 levels, although making sharp advances during the past two years.

Despite these facts, a review of public comment on current land market developments indicates a tendency to view the 1912-14 average as "normal" for individual States as well as for the Nation, and to regard current land values as still "too low" if under 100. The implication of this view is that advances to the pre-World War I average are amply warranted and that there is little need for concern over current increases in values until

the 1912-14 average level has been passed. On the contrary, however, the pre-World War I base has no necessary "normal" value implications either for the various States or the United States. Complex economic developments during the last 3 decades have changed materially the former structure of farm product prices, production costs, net farm incomes and rents, and even the land value levels that given land incomes will support. As a result, existing prospective patterns of land values also must inevitably be greatly changed.

QUANTITY changes resulting from land reclamation through clearing, drainage and irrigation have lifted value levels in many areas more or less permanently. Expansion in production of more intensive crops, particularly those requiring a heavy investment in orchards and groves, also has caused an upward shift in land value levels in some areas. Similar changes have flowed from an increase in demand for some of the higher income producing crops, such as vegetables and certain types of tobacco; from the growth of industry in areas that formerly were largely rural; and from an increase in demand by city people for rural residences. To a considerable extent, changes such as these explain the increase in value levels during 1935-39 in California and Florida; in Kentucky, Tennessee and North Carolina; in several of the New England States; and in many areas within States, particularly those adjacent to metropolitan centers.

Forces operating in the direction of a downward shift in value levels from those of the 1912-14 period have predominated in other areas. Reduction in the export or domestic demand for certain major crops and a revaluation of long-run productivity potentialities appear to be the principal elements in this type of value

level shift. The revaluation has resulted from a fuller appreciation of limitations imposed upon production by factors such as soil depletion and erosion and climatic fluctuations.

Developments in certain of the Northern Plains States show how such factors have lowered land value levels. A succession of crop failures due to droughts during the '30s convinced many farmers and investors that major areas in these States were not suited for permanent arable agriculture under existing types of farm enterprise. Successive years of low income caused widespread mortgage debt and tax delinquency and forced much distressed land upon the market. During those years, unwilling owners had almost no opportunity to liquidate their holdings. Although farmers in these States recently have had several good crop years and increasingly favorable prices, accompanied by expansion in farm sales and land values, the basic attitude toward long-run production prospects still appears to be influenced to a considerable extent by the experience of the '30s. Also, a cautious attitude continues with respect to the long-term outlook for wheat prices. Even though values may rise along with the current decline in lending agency holdings and with the easier handling of private and public debts and taxes, other influences indicate that future land value levels in these areas are likely to be substantially below those of 1912-14.

Most of the types of forces cited here have influenced land values largely through their effect upon land income, with impacts more or less peculiar to particular areas or regions. Yet land income is but one of the two primary elements determining land value levels. The other is the relation between income and values. Since the 1912-14 base period a significant change has occurred in land income and land value relationships in terms of the ratio of current rents

to values. The ratio of current income to value in the pre-World War I years ran in the neighborhood of $4\frac{1}{2}$ percent. During the more stable income periods since that time, 1925-29 and again 1935-39, the ratio averaged about $5\frac{1}{2}$ to 6 percent. Before the last war, many buyers were anticipating a continuous long-time upward trend in land values and were willing to accept lower current returns in anticipation of an increase in capital values. After the price crash in 1920, the return then being received was increasingly considered the full return expected, and needed to cover not only the rates available from more or less risk-free and liquid alternatives, but also the particular risks and possible lack of liquidity associated with land ownership. Due to an increased awareness of the nature of the returns, the proportion required to cover risks has probably increased. Because of major commodity price fluctuations, returns are now considered more uncertain than they were regarded previously, and the possibility of the physical depletion of land resources through erosion is more real. Contributing further to this change has been an increase in the reluctance of purchasers to sacrifice living levels in order to support higher land values.

Although interest rates on alternative investment opportunities, including farm mortgages, have been declining and are below those of the 1912-14 period, this reduction probably has not been sufficient to prevent a net rise in the rate of return required on land investments if adequate recognition is given all the various costs and risks involved.

As a result of this change in the income-value relationship, the value levels that a given net land income series would maintain in the pre-World War I period were from 15 to 20 percent higher than the levels that would have been supported by the same income in the years immediately preceding the present war.

Altogether, these considerations suggest the need for a more recent base than 1912-14 in evaluating the significance of wartime changes in land values. The 1935-39 period, for example, would provide a more appropriate bench mark. During this relatively recent period, values were exceedingly stable for the country as a whole, as well as in the various geographic divisions. This general stability continued into 1940 and 1941. Average per acre net rents (including Government payments) in the 1935-39 period were almost identical with the 1912-14 average.

OF COURSE, future farm prices and incomes, and hence rents, may change drastically as the result of the war. But if net rents in the longtime post-war period return to the levels prevailing in both the pre-war periods, land values for the country as a whole are more likely to tend toward the 1935-39 average rather than that of 1912-14. Again, the return to such an average national rent level is likely to involve a regional pattern of rents and values approaching much closer to that of 1935-39 than of 1912-14. Principal areas in which an upward adjustment from the 1935-39 value levels would appear warranted would be the extreme western Corn Belt and

the Northern Plains. Because of a series of crop failures, rents were low in this period and values were further depressed by the extensive land holdings of unwilling owners. Such an adjustment would result in future value level expectations definitely above those of 1935-39, although still far short of 1912-14.

The validity of the benchmark used in judging the significance of wartime value changes and levels is more than an academic question. To the extent that the actions of farm buyers and lenders are based on the belief that current land values are "too low" merely because values are under those of 1912-14, they are operating upon a shaky premise. In many areas value fluctuations with peaks not materially in excess of the pre-World War I levels could have consequences approaching in seriousness those that followed World War I. The unconsidered acceptance of the view that values will ultimately return to levels of a period as far back as 1912-14 is likely to divert attention from the basic elements entering into determination of warranted value levels, and at the same time lead to complacency concerning current developments and the need for controls.

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FEDERAL CROP INSURANCE

THAT part of the Agricultural Appropriation Act of 1944 which had to do with the Federal crop insurance program stipulated that " * * * no part of this appropriation shall be used for or in connection with the insurance of wheat and cotton crops planted subsequent to July 31, 1943, or for any other purpose except in connection with the liquidation of insurance contracts on the wheat and cotton crops planted prior to July 31, 1943."

Inasmuch as wheat insurance contracts written on the 1943 crop—approximately 487,000 of them—were for a 3-year period the Federal Crop

Insurance Corporation is now in the process of notifying these growers that any crop planted after July of this year cannot be insured. The 1943 contract contained a proviso that insurance under it was subject to any subsequent legislation including appropriation statutes, which Congress might enact. Insurance written on the 1943 wheat and cotton crops is still in force, however, and all justifiable claims will be paid.

With the FCI program thus bowing out of the general farm program, it might be well to take a retrospective glance at what its objectives were and

what was accomplished toward fulfilling them.

First of all, the need for some kind of protection to the farmer against unavoidable crop losses is as old as agriculture itself. This need has always been recognized and was not questioned by Congress this year in failing to provide funds to continue the program. At different times between 1899 and 1932 private insurance companies had ventured into the all-risk insurance field, but for various reasons none was successful. The experience of these companies was drawn upon as far as possible in setting up the Federal crop insurance program as administered under Title V of the Agricultural Adjustment Act of 1938.

ASIDE from the obvious objective of alleviating the direct effects of crop failure, the program as first applied to wheat in 1939 and to cotton in 1942 had other important functions: (1) To develop through experience a sound and workable system of insurance for farmers so they, like people in virtually every other line of business, might protect themselves against unavoidable catastrophies; and (2) To lessen the amount the government has been required to spend for agricultural relief because of crop failures, which, during the period from 1926 to 1935, averaged approximately \$60,000,000 a year.

The two principal criticisms of the

crop insurance program were the limited participation in the program, and the excess of losses over premiums each year, even though some of the years since 1939 have been reasonably good crop years for the nation as a whole.

This year nearly a third of the nation's wheat growers are protected against loss of their crop. This year, the second year for cotton crop insurance, about one-tenth of the cotton growers are protected against loss of cotton and cottonseed. Participation and other significant figures pertaining to the program are shown by years, in the following tabulation:

The record of losses in relation to premiums is not as favorable as was originally anticipated. It should be remembered, of course, that the program was developed without any experience except that of private insurance companies. It was decided to insure on a yield basis rather than on an income basis in order to avoid insuring price risks; the principle of insurance in kind was a natural consequence of this decision. Instead of insuring all farms in an area on the same basis, the coverage per acre and the premium rate were determined to fit the farm. To create an incentive to produce the best crop possible, coverage could not exceed 75 percent of the farm's average yield. To utilize existing Department of Agriculture machinery and to have the program

Wheat

Crop year	Farms insured	Number indemnities	Acreage insured	Insured production	Premiums collected	Indemnities	Premiums less indemnities
				<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>
1939	165, 775	55, 932	7, 235, 000	60, 837, 000	6, 670, 315	10, 163, 890	-3, 493, 584
1940	360, 596	112, 762	12, 755, 000	108, 282, 000	13, 796, 797	22, 899, 016	-9, 102, 219
1941	371, 892	130, 770	11, 736, 000	104, 327, 000	12, 643, 186	18, 837, 078	-6, 193, 892
1942	400, 048	108, 420	(¹)	(¹)	8, 770, 002	10, 570, 880	-1, 800, 878
Total	1, 297, 811	407, 884			41, 880, 300	62, 470, 873	-20, 590, 573

Cotton

					<i>Pounds</i>	<i>Pounds</i>	<i>Pounds</i>
1942	172, 721	47, 195	2, 725, 000	(¹)	31, 451, 235	62, 159, 220	-20, 707, 985

¹ Not available.

Preliminary figures on number of farms on which insurance was written for 1943 are: Wheat 487,663; cotton 177,296.

run by men experienced in farming and familiar with other phases of the Department's program, crop insurance has been handled in counties by county and community committeemen of the Agricultural Adjustment Agency.

ONE of the principal problems encountered in the operation of the program was that of establishing average yields for individual farms. Data were not available for the majority of the farms and many of the data that were available were unreliable or no longer applicable. Many of the average yields had to be appraised or revised and there was a strong tendency to bring those estimates closer to the county average than they should have been. This tended to result in over-insurance of farms of low productivity and under-insurance on farms of high productivity. It is

probable that the number of over-insured farms in the program has exceeded the under-insured ones because insurance is more attractive for the over-insured farms.

Adverse selection of risks is difficult to avoid in any type of insurance. If soil moisture or other seeding conditions are unfavorable, it is more likely that the farm will be insured than if conditions are favorable. For example, lack of soil moisture in the Plains area resulted in heavy insurance in 1939 and 1940, whereas, plentiful moisture before seeding time in 1941, 1942, and 1943 in this area resulted in a serious decrease in insurance participation.

The program has been administered in over 2,000 counties, and in some of these counties crop insurance was a minor phase of the work of those who administered the program.

Crop Insurance Participation Cumulative Figure, 1939-1942, by States as of June 30, 1943

State	Farms insured	Number of indemnities	Premium	Indemnity	Surplus (+) deficit (-)	Farms insured 1943 ¹
			<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>	
Arizona.....	323	137	6,672	33,603	-26,931	207
Arkansas.....	77	35	666	3,397	-2,731	49
California.....	7,884	3,601	632,678	2,033,219	-1,400,541	3,048
Colorado.....	14,045	4,210	858,300	843,686	+14,614	4,793
Delaware.....	1,834	214	16,193	13,200	+2,993	418
Idaho.....	25,559	3,119	582,472	707,069	-124,597	6,726
Illinois.....	89,088	25,676	1,127,936	2,405,016	-1,277,080	68,549
Indiana.....	100,702	25,676	1,011,773	1,667,978	-656,205	47,659
Iowa.....	23,542	8,719	351,834	954,084	-602,250	7,440
Kansas.....	169,628	67,092	8,820,081	14,611,387	-5,791,306	49,777
Kentucky.....	2,407	456	34,665	25,298	+9,367	2,083
Maryland.....	6,417	739	68,067	44,975	+23,092	2,328
Michigan.....	62,601	9,897	378,380	386,405	-8,025	36,918
Minnesota.....	61,184	11,752	978,883	768,026	+210,857	17,394
Missouri.....	80,293	32,403	979,371	3,109,982	-2,220,611	48,603
Montana.....	14,872	3,416	1,849,878	1,171,665	+678,213	2,950
Nebraska.....	191,679	88,960	6,868,296	13,854,145	-6,985,849	47,393
Nevada.....	336	110	5,985	12,532	-6,547	96
New Jersey.....	565	43	3,194	2,214	+980	287
New Mexico.....	792	280	93,266	114,080	-20,814	475
New York.....	4,303	333	30,888	20,690	+10,198	2,407
North Carolina.....	2,510	196	11,056	5,775	+5,281	8,731
North Dakota.....	91,188	22,492	5,326,491	3,911,343	+1,415,148	12,226
Ohio.....	109,177	15,360	1,052,083	639,904	+412,179	49,710
Oklahoma.....	77,932	28,882	2,558,549	3,959,987	-1,401,438	21,667
Oregon.....	11,307	2,533	667,639	469,832	+197,807	4,789
Pennsylvania.....	22,330	8,276	139,017	161,022	-22,005	9,036
South Dakota.....	52,353	22,580	3,059,290	3,862,524	-803,234	6,209
Tennessee.....	2,103	176	12,296	5,922	+6,374	1,603
Texas.....	33,747	19,465	3,024,214	5,512,404	-2,488,190	13,284
Utah.....	8,561	1,237	157,430	172,839	-15,509	4,584
Virginia.....	7,268	879	56,600	40,090	+16,510	1,780
Washington.....	13,052	1,748	768,199	432,651	+335,548	4,838
West Virginia.....	600	118	4,722	8,196	-1,474	941
Wisconsin.....	3,518	743	20,637	27,724	-7,087	2,060
Wyoming.....	8,544	1,331	332,632	389,910	-57,278	705
Total.....	1,297,811	407,884	41,880,308	62,470,874	-20,590,571	487,663

¹ Preliminary.

As experience in the program was obtained and analyzed, many improvements were made. Wheat on summer-fallowed and continuously cropped land on the same farm were insured on the basis of different average yields and premium rates. Control figures known as county check yields and check rates were placed over the average yields and premium rates established for individual farms. Annual yield data were gathered for farms each year and incorporated into the average yield and premium rate figures already established so as to improve and keep such figures current. Premium rates in general were increased to cover losses that were larger than anticipated.

TO AVOID adverse selection of risks, closing dates for acceptance of applications were advanced to as early a date as practicable and arrangements for payment of the premium were required to be made with the submission of the application. In 1942 farmers were required to insure all the farms they owned in any given county—they could not pick and choose. In 1943 to still further avoid adverse selection of risks a 3-year contract was adopted. The Crop Insurance Act provided that insurance would be written on an annual basis for the first 3 years.

The benefits of some of these improvements have not yet had time to accrue or to be reflected in results. Whether they would have kept losses within premium collections cannot be determined in view of discontinuation of the program.

The cotton insurance program began with the 1942 crop. Although much of the wheat experience was applicable, new problems were encountered. Being a tilled crop, care during the growing season was a more important factor than in the case of wheat. Also, the latest possible date on which insured growers should be required to replant acreage on which they did not get a

stand was an important problem. The insurance of sharecroppers involved field insurance rather than farm insurance and necessitated a different insurance proposition for landlord and tenant. For 1943 a plan is being tried on American-Egyptian cotton whereby indemnities will be reduced to reflect the savings in cost where the acreage was abandoned or where costs of picking are reduced as a result of low yields. This principle was incorporated in both wheat and cotton programs as planned for 1944. Benefits of experience in cotton even more so than for wheat have not had time to be reflected in loss experience.

THE character and location of the losses under the wheat insurance program are interesting. The high-risk wheat-producing area of the Plains States was not the principal beneficiary of the insurance program. Participation and losses in 1939 and 1940 were heavy in the hard winter wheat area of the Southern Plains States as a result of deficient moisture. In fact, 75 percent of the 1940 losses for the country as a whole were attributable to drought and although summarized data are not available for 1939, the situation apparently was quite similar. The spring wheat States have had relatively small losses throughout the program and have built up a substantial balance in excess of indemnities.

In 1941 nearly 60 percent of the losses for the entire wheat program were attributable to winter kill, a result of the severe freeze on November 11, 1940, covering the area from central Nebraska to central Illinois. Final figures on 1942 losses are not yet available but indications are that heaviest losses were caused by winter kill and poor growing conditions in much of the Corn Belt and greenbug infestation in parts of Oklahoma and Texas. In 1943 it is apparent that a large part of the losses will be in the area east of the Plains where winter kill and floods have been the main

causes of wheat crop failures. This record of losses indicates that the insurance program has filled a need for protection not only in the high-risk

areas but throughout the country as a whole.

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FARM TENURE CHANGES

SHIFTS in the tenure of farms during wartime are occurring at a very rapid rate. Recent investigations in selected areas indicate that more tenants than usual changed farms at the beginning of this crop year, and that the rate of turn-over in farm ownership at the end of 1942 was greater than any time since the first World War. During the year preceding March 1, 1943, the ownership of farms changed at the rate of 44.4 per thousand. This represents a considerable increase over the low point in 1932 when 16.2 farm sales or trades were made per 1,000 farms, and a significant rise above the 1940 rate of 30.2 per thousand. Increased farm purchase and sale activity accounts for only a part of the present rapidly changing farm operating unit pattern. Furthermore, as indicated by recent investigation in the field, more farming units were reconstituted at the beginning of this year than during the past several years.

War-created circumstances are largely responsible for the unusual magnitude of tenure changes. The drain of younger men from farms into the armed forces and into industrial employment and the flow of family men from the cities to the farms, have brought about this increased turn-over in the occupancy of the Nation's farms. Not all of the change, however, is attributable to in-and-out migration. Much reshuffling has been occurring among the established farmer groups. In the better agricultural areas, many changes are brought about by farmers purchasing farm units for their sons. The shortage of manpower in some sections has given many tenants an opportunity to go to larger and better equipped farms. Some farmers who

have lost their hired laborers have been compelled to reduce the size of their operations, and to reorganize units accordingly. Generally, farmers throughout the country have been able to use their high wartime incomes for purchasing small tracts necessary for rounding out better farm units.

IN THE majority of the areas investigated, more than 20 percent of all farms underwent some sort of tenure change between 1942 and 1943. In one area of the Great Plains, 35 percent of the farms (comprising nearly 40 percent of the entire land area) were involved in tenure shifts of one sort or another. Here 21 percent of the farms were involved in change in operatorship only, 6 percent in ownership change, and 8 percent in both operatorship and ownership shifts.

During 1941-42, farmers were confronted with a probable continuing decline in their labor supply. This situation led to many changes in the operation of farms as farmers began to plan for a continued labor shortage throughout the remainder of the war. Efforts on the manpower front, however, began to be felt in 1943. The drain away from the farms was slowed down materially, and considerable migration back to the farms has taken place in some areas. Faced with a potentially less acute scarcity of labor, farmers felt free again to expand operations in accordance with their resources. With the improvement in the labor situation in 1943, farm operators who had reached retirement age in 1942, but who continued to farm, established tenants in full charge of their farms and discontinued active farming. Primarily because of the improvement in the labor situation,

farms in the marginal areas that were idle in 1942 have been taken up again in 1943. In some sections of the country, chiefly the wheat and range livestock areas, significant expansion in crop acreages has occurred.

The conditions that are giving rise to tenure changes differ vastly from one area to another. Likewise, the tenure situation is by no means similar for all sections. As may be expected, because of wide geographical differences in the agricultural situation, it is not surprising that entirely opposite tenure trends are occurring. In North and South Dakota, for example, where farm tenancy had climbed to 45 and 53 percent of all farm operators respectively in 1940, a marked reversal of trends is noted. In one area surveyed in North Dakota, tenancy declined from 56 percent in 1941 to 35 percent in 1943, and in an area where records were obtained in South Dakota, the percentage of tenancy for this 3-year period declined from 61 to 52. On the other hand, investigations in selected areas in Nebraska and Kansas reveal the continuation of a steady trend toward tenant farming. In the Nebraska area, tenancy increased from 60 percent in 1941 to 73 percent in 1943, and in the Kansas area, tenancy rose from 42 to 44 percent.

WITHIN any one area, not all farmers are experiencing the same success in improving their tenure status. Some farmers within the same general areas are increasing their tenure security materially, while the tenure of some is being undermined, and still others are establishing themselves on a very hazardous tenure footing. The well-established farmer with a good productive plant is making more money than ever before. He is paying off his mortgage indebtedness, increasing the size of his farm unit, and generally becoming more firmly established. The situation applies to the large bulk of owner and part-

owner operators in the best commercial farming areas. The total farm mortgage indebtedness of all farmers has continued to decline. During 1942, mortgage debt repayments exceeded new mortgages placed on farm real estate by 364 million dollars. In addition to paying off debts, many owner operators on small farms are buying additional acreage, thus acquiring farm units with more economic stability. The part-owner operator in many sections is purchasing the tracts of land which he has formerly rented. Altogether, during the last year, about half of the farm real estate purchases for operation were by owner operators.

In contrast to these groups who are improving their tenure situation, there are others for whom the tenure outlook is not too good. One of these groups consists of those who have been purchasing farms on contract with small down payments and at relatively high prices. In the event of an economic collapse after the war, many of these purchasers would find it difficult or impossible to meet their contract payments. Another group whose tenure situation is uncertain consists of those who have contracted to pay excessively high rents. Fortunately, current reports indicate that rents are exorbitantly high in only a few areas. Still another group whose future security is uncertain consists primarily of those who have recently moved from the city to farms that are small and unproductive. These new farmers have been compelled by competition to take up the small, less desirable farming units. Established farmers with considerable farming experience have had first choice of available farms to rent.

In addition, in the unprecedented reshuffling that is going on at the present, many farm operators are losing out. Farm tenants are experiencing a loss in a portion or all of their units when the ownership of the land is changed. They must be satisfied

with smaller units or seek new locations. To obtain new farms, many are forced to accept higher rent contracts. Undoubtedly, the majority of tenants who moved at the beginning of this year improved their situation because of their generally improved bargaining position, although not all of them did so. For example, in one western area where investigations were made, it appears that purchase and sale transactions have resulted in absorption of a considerable number of small farms by the larger operators. The small farmers, whose farms have been bought up, for the most part have been obliged to rent less desirable farms, and in some instances must pay two or three times the pre-war rent.

Thus far in the war, farmers as a whole have been making rapid progress in acquiring ownership of the land they operate. From 1939 to 1941, two-thirds of all the buyers of farm real estate were active farmers. During this same period, only a third of the sellers of farms were farmers. The net gain in ownership by farmers approximated a third of all land transferred during this three-year period. From the gains in ownership by farmers through purchase and sale transactions, of course, must be subtracted the losses through foreclosures, tax forfeitures, and land reverting to estates upon the death of owner operators. In 1943, farmer sales have continued at the one-third level, but their acquisitions have declined from two-thirds to two-fifths of all farm purchases.

Ownership by lending agencies, estates, and retired farmers has declined sharply during the past few years. It will be recalled that the loss of ownership by farmers through foreclosure during the depression years reached catastrophic proportions. In 1933 alone, 39 farms out of each 1,000 were lost through foreclosure and related defaults. Foreclosures continued at above the normal rate

through 1937, by which time the leading lending agencies had accumulated farm real estate valued at more than 1 billion dollars. Starting at the beginning of 1938, the holdings of these lending agencies have been rapidly liquidated, and by the beginning of 1943, had declined to \$620,000,000. An abnormal accumulation of estate holdings also occurred during the depression years when heirs were reluctant to dispose of inherited farms at depression prices. Now, with a considerable advance in land prices, interested parties have shown an increase in willingness to dispose of their holdings.

Active farm tenants, owner-operators, and part-owner operators have acquired a large share of the farms disposed of by lending agencies, estates, and other unwilling owners. Of recent date, however, individual investors in some sections have become more active buyers than farmers.

Farm rent increases have exceeded somewhat the rate of increase in land values. The average cash rent per acre for those farms rented wholly for cash in the East and West North Central States is 11 percent higher than in 1942, and 26 percent higher than in 1940. Rents for irrigated and grazing land have risen more sharply than rents for general farms. In the 11 Western States, the average rent per acre for grazing land has risen approximately 35 percent since 1940. Rents this year for irrigated land in these Western States were 50 percent above the average for 1940.

Rental returns to landlords renting on a share basis have increased more rapidly than cash rents. Share rents throughout the Corn Belt are reported yielding substantially more than cash rents primarily because of the increase in agricultural prices. Increases in fractional shares are reported in only a few areas. On combination share and cash rental arrangements, little change has been made in the frac-

tional shares, but cash payments have been boosted considerably. For the United States, 37 percent of nearly 9,000 real estate dealers reporting on rent changes in their locality on March 1, 1943, indicated increases over the previous year in cash payments on share-cash rental arrangements. Approximately one-half of these dealers reported no change over 1942 in fractional share rents or cash rents.

Some shift in major types of renting is resulting from the high agricultural incomes, exceptionally favorable livestock-feed price ratios, the labor situation, and other factors. Quite a number of landlords have entered 50-50 livestock share arrangements with their tenants in corn-hog and dairy farming sections. In other cases, landlords have shifted from cash renting to crop-share leasing. At present, share renting arrangements are yielding greater returns to landlords than prevailing cash rents, especially in areas where crop yields are relatively stable. Therefore, many tenants are desirous of shifting to a cash basis, and landlords are exerting pressure on tenants to shift to crop and livestock share-renting, with the determination as to whether a shift shall occur resting primarily upon the relative bargaining position of the parties. The type of agricultural area also appears to have some influence upon the direction of the shift in method of renting that is taking place. In the more hazardous producing areas, semi-arid regions and poorer farming sections generally, cash renting is tending to increase. In the better agricultural areas, on the other hand, the general tendency appears to be toward an increased amount of share renting.

MANY resident landlords, who have been operating farms with hired managers or hired laborers, have shifted to tenant operation. In order

to hold managers on farms, these landlords have changed the basis of their employment from a fixed salary to a share of the income. Some local landlords who maintain full management of their farms and use hired laborers have shifted laborers from a paid basis to a sharecropping basis. This system and the 50-50 livestock share-renting arrangement are especially well adapted for newcomers who wish to take over fully equipped farms from retiring owner operators.

In the South, the trend away from sharecropping, noted in the last decade, appears to have been reversed. From 1930 to 1940, the number of sharecroppers decreased 235,000, or 30 percent. Some of these croppers left agriculture, others entered a tenant status, but the majority shifted to wage labor status. Starting about 1932, the trend away from sharecropping continued until about 1939. Beginning in 1939, larger numbers of plantation managers made an effort to shift again to a system placing greater emphasis on the sharecropper as a source of labor. A principal reason for the recent shift to sharecropping is that laborers are now in a better bargaining position than formerly. When the Southern farm laborer has the opportunity, he chooses sharecropping in preference to day labor status. Another factor giving rise to this shift is that plantation managers have been willing to give laborers a sharecropper's status in order to help retain a stable labor supply. It is expected that the trend toward increased use of sharecroppers will continue as long as there is a labor scarcity. The future of the sharecropper system after the war is uncertain. For the country as a whole, the prospects are promising for a net gain in the tenure position of the Nation's farmers.

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*Bureau of
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Economic Trends Affecting Agriculture

Year and month	Industrial production (1935- 89= 100) ¹	Income of in- dustrial workers (1935- 89= 100) ²	Cost of living (1935- 89= 100) ³	1910-14=100					Prices paid, interest and taxes	Farm wage rates
				Whole- sale prices of all com- modi- ties ⁴	Prices paid by farmers for commodities used in—					
					Living	Produc- tion	Living and pro- duction			
1925.....	90	126	125	151	163	147	156	169	176	
1926.....	96	131	126	146	162	146	155	168	179	
1927.....	98	127	124	139	160	144	153	166	170	
1928.....	99	126	123	141	160	148	155	168	179	
1929.....	110	134	122	139	159	147	154	167	180	
1930.....	91	110	119	126	150	141	146	160	167	
1931.....	75	84	109	107	128	123	126	142	130	
1932.....	58	68	98	95	108	109	108	124	96	
1933.....	69	61	92	96	108	108	108	120	85	
1934.....	75	76	96	100	122	123	122	129	95	
1935.....	87	86	98	117	124	127	125	130	103	
1936.....	103	100	99	118	123	125	124	128	111	
1937.....	113	117	103	126	128	136	131	134	126	
1938.....	89	91	101	115	122	125	123	127	125	
1939.....	108	105	99	113	120	122	121	125	123	
1940.....	123	119	100	115	121	124	122	126	126	
1941.....	156	109	105	127	131	131	131	133	154	
1942.....	151	238	116	144	154	149	152	151	201	
June.....	176	234	116	144	154	150	152	151	183	
July.....	178	240	117	144	155	150	153	152	202	
August.....	183	251	118	145	156	150	153	152	-----	
1943—May.....	203	302	125	152	170	162	167	163	-----	
June.....	201	305	125	152	171	163	168	164	251	
July.....	205	-----	124	151	172	164	169	165	274	
August.....	-----	-----	-----	-----	172	164	169	165	-----	

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chick-ens and eggs	All groups	
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	128	144	121	140	155	144	139	84
1928.....	130	152	176	159	151	158	153	149	80
1929.....	120	144	141	149	156	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	61
1932.....	44	47	82	102	63	83	82	65	52
1933.....	62	64	74	105	60	82	75	70	58
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	115	114	89
1937.....	128	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	106	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	98	78
1941.....	96	113	92	144	144	131	122	122	92
1942.....	119	155	125	199	189	152	151	157	104
June.....	116	153	148	160	191	141	137	151	101
July.....	115	155	131	200	193	144	145	154	100
August.....	115	151	126	256	190	151	156	163	107
1943—June.....	151	166	234	308	211	178	179	190	115
July.....	154	163	230	315	206	178	183	188	116
August.....	155	167	204	308	206	181	193	193	117

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised March 1943.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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COMPARISONS OF United States food production during this war and the first World War show striking contrasts and striking similarities. At the beginning of the two wars we were producing about the same amount of food per capita. Similarities which developed during both wars include: substantial livestock increases, feed and fertilizer shortages, extremely long hours, relatively high wages, and favorable prices to farmers. * * * Improved seeds, fertilizers, machinery, and operating practices, all developed since World War I, together with favorable weather contributing to record-breaking yields, have made rapid production expansion more easily possible during World War II. In addition, soil conservation measures and experience in other extensive agricultural programs during recent years have facilitated expanded production this time. * * * On the other hand, the much more critical farm machinery and farm labor shortages in this war make sustained production difficult. In the last war the armed forces were comparatively smaller and less mechanized—farm machinery manufacture was not greatly restricted and farm labor shortages were eased by increased mechanization of farming.

Commodity Reviews

FEED SUPPLIES

DURING the past year Government owned wheat has been a major source of feed, especially in deficit areas. Over 400 million bushels of wheat were fed to livestock in the year ended September 1943, a much larger quantity than in any previous year. The quantity of wheat fed during 1943-44 will depend to some extent on how much can be imported from Canada and how much can be purchased through the Government purchase program. Present indications point to 250 million bushels of domestic wheat to be fed during 1943-44 if the 1944 wheat crop is average or better. About 125 million bushels of this may be Government wheat. The remaining 125 million bushels is expected to be fed on the farms of wheat growers. This total will probably be supplemented by feed wheat imports from Canada.

As of October 1, 1943, stock of Government wheat totaled about 115 million bushels; about 70 percent held in the West North Central section, 10 percent in the South, 15 percent in the West, and small quantities in the East North Central and North Atlantic areas.

The national 1943-44 average feed grain supply per animal consuming unit expected on farms on January 1944 is about 12 percent smaller than in 1942-43 and 8 percent below the 1937-41 average. By drawing on reserve stocks the feeding rate per animal unit, however, may be as large as the 1937-41 average but somewhat below the heavy rate of feeding in 1942-43. But because of the difficulty of obtaining shipments, less feed than the 1937-41 average per animal unit may be available in some deficit areas.

In several regions feed supplies for 1943-44 season are smaller than in 1942-43. Corn Belt feed grain supplies are 8 percent smaller; in the drought affected Southern States both

feed and hay grain supplies are materially reduced over last year; in the West, feed grain supplies are 5 percent smaller; and in the North Atlantic States the locally grown grain supply is 19 percent smaller than in 1942.

The North Atlantic States will have 5 to 10 percent less feed concentrates than a year ago.

No corn will be available from Argentina until the 1944 crop is harvested, but Argentine wheat supplies are 38 percent above the 1937-41 average. During 1943-44 a considerable quantity of wheat is expected to be imported from Canada. While available shipping space will limit the total quantity of feed grains imported from Canada in 1943-44 total imports of oats, barley, and wheat may be equivalent to 120 million bushels of corn. Canadian wheat supplies are smaller than last year but much larger than needed for Canadian requirements.

On the basis of production indicated October 1, the corn supply for 1943-44 is expected to be about 3,429 million bushels, about 238 million bushels smaller than the supply last year but 378 million bushels larger than the 1937-41 average. These estimates represent an increase of 44 million bushels over September 1. Corn receipts at primary markets in August were nearly double July receipts and were adequate to meet the needs of corn processors, but commercial supplies are still much below the requirements of feed mixers and livestock feeders in deficit feed areas. The commercial stocks of corn of the 46 terminal markets were reduced to 5.6 million bushels in late August, the lowest level in recent years.

During September the oats supply outlook for 1943-44 improved moderately. Oat prices went up 26 cents a bushel over a year ago. The 1943-44 barley and grain sorghum outlook declined during September.

DAIRY PRODUCTS

THE WAR Food Administration control of fluid milk sales, through the establishment of quotas on deliveries of milk, cream, and milk by-products, began October 4 in 13 eastern and midwestern metropolitan areas, and is being applied to other areas as rapidly as possible. It is planned to extend the program until all markets of at least 50,000 population are included.

The basic purpose of the program is to prevent a further increase in the consumption of fluid milk rather than to reduce present consumption. This is necessary so that enough milk will be available to produce the cheese, butter, and other manufactured dairy products required by the armed services and civilians. As milk conservation and control will be effected at the dealer level, consumer point-rationing is not involved.

Milk dealers in the initial milk sales areas brought under control are allowed to sell as much fluid milk each month as they sold last June 1943, the peak production month. Cream sales are limited to 75 percent of the quantity sold in June, and the sales quota for fluid milk byproducts as a group, is 75 percent of June sales. Producer-distributors who purchase no milk (except those whose volume of sales is small enough to exempt them from the quota) are allowed to sell an amount of fluid milk, cream, and fluid milk by-products equal to 100 percent of their total milk production in June.

The War Food Administration program to protect dairy farmers against increases of dairy feed prices above the 1942 level is planned to go in effect from October 1 through December 31, 1943.

Payment rates are 50 cents in areas where the quantity of purchased feed is large and feed costs have advanced the most, and where the price advances received for milk since the period immediately preceding our entry into the war have been the least. In areas where less feed is purchased

and milk-feed price ratios are more favorable, the rates scale down to a minimum of 30 cents. When butterfat rather than whole milk is delivered, the rates are 4 to 6 cents per pound of butterfat. The payment rate where a milk subsidy was already in effect, or where a hay program had stabilized hay prices to dairy producers, was adjusted to take these programs into account. The U. S. average payments will be about 36½ cents for milk and 4¼ cents for butterfat on the basis of 1942 milk and cream sales.

Milk production for the first 10 months of 1943 is estimated at 102,505 million pounds and compares with 103,198 million for the same period of 1942. Butter production from January through August this year was 1 percent lower than in 1942, and in recent weeks has been 7 to 12 percent lower than in the comparable weeks of 1942. Increased consumption of fluid milk and cream has been at the expense of butter and other milk products. Evaporated and dried skim-milk production are both 15 percent below the 1942 January-August production.

FARM EMPLOYMENT

THE NUMBER of people working on farms increased 436,000 during September this year, making October 1 farm employment 11,938,000 persons, 17,000 above that of a year ago.

The farm employment increase over last year occurred primarily in greater employment of family workers (8,834,000) which was 2 percent higher than family workers on farms a year ago and slightly more than the (1938-42) average for that date. On the other hand, the 3,104,000 hired workers on farms on October 1, 1943, is 5 percent less for that date a year ago and 7 percent less than the 1938-42 average.

In general, as harvesting began this year farm labor requirements of most regions were being met. In North Dakota the need for additional harvest workers was met by help of

soldiers, by bringing in a large number of southern farmers, by use of volunteer labor from cities, and by the use of out-of-State combines. In Texas, as in many other States, supplemental labor was provided by school children, college students, boy scouts, civic groups, and war prisoners.

The farm labor situation on the West Coast continued difficult during September even though eased by large numbers of Mexican nationals and other recruits used in the crop harvest.

DEMAND, PRICES, INCOME

OVER-ALL demand for farm products is expected to average somewhat higher in 1944 than in 1943 but the rate of increase will be slower than during the last 3 years. The volume from 1943 crops available for sale in early 1944 is expected to be nearly as great as the amount sold in the early part of this year from the record crop production of 1942.

Military and foreign requirements for agricultural products contribute substantially to the total demand for such commodities. In 1943, one-fourth of our agricultural food production has been allocated to military, lend-lease, and other special needs, compared with 14 percent in 1942 and 6 percent in 1941. Lend-lease and foreign relief demands have been especially strong for foods such as dried milk, dried eggs, canned meats, soybeans, dried fruits, and fats.

Prices received by farmers in 1943 are expected to average about 20 percent above 1942. Although maximum wholesale and retail prices have been established for most agricultural products, demand has been sufficiently great to maintain prices at or near ceiling levels. Partly because of adjustments in loan rates, support prices, and price ceilings, prices received by farmers are expected to advance somewhat from present levels.

The index of prices paid by farmers, including interest and taxes, will probably average 164 in 1943 (1910-14=100) as compared with 151 in 1942, a

9-percent increase. Prices of things the farmer will buy are expected to continue at relatively high levels during 1944 and farm wage rates will probably continue rising.

The September 1 estimate of the 1943 total cash farm income, including Government payments, is 19.9 billion dollars. The 1943 estimated gross farm income which includes the value of home consumption and rental value of buildings is 22.7 billion. Production expenses will absorb about 10.2 billion of this gross income.

During the first eight months of 1943 income from various classes of products increased over the same period for 1942 as follows: food grains 27 percent; feed grains and hay 29 percent; cotton and cottonseed 41 percent; oil bearing crops 124 percent; vegetables 44 percent; fruits and nuts 35 percent; meat animals 27 percent; dairy products 22 percent; and poultry and eggs 52 percent.

Index Numbers of Prices Received and
Paid by Farmers
[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products ¹
1942			
January.....	149	145	103
February.....	145	147	99
March.....	146	150	97
April.....	150	150	100
May.....	152	151	101
June.....	151	151	100
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	160	154	110
November.....	160	155	109
December.....	178	156	114
1943			
January.....	182	157	116
February.....	178	159	112
March.....	182	160	114
April.....	185	162	114
May.....	187	163	115
June.....	190	164	116
July.....	188	165	114
August.....	193	165	117
September.....	193	165	117

¹ Ratio of prices received to prices paid, interest, and taxes.

LIVESTOCK

THE WAR Food announcement that all quota limitations on livestock slaughter will be suspended from Sep-

tember 1 through October 31 was followed up by an order suspending inventory restrictions on slaughterers and meat handlers until further notice. All other provisions of the licensing program remain in effect. The action is expected to encourage increased slaughter in September-October and thus help avoid a glut during late fall and winter peak runs.

The Office of Price Administration announcement during September of a ceiling of \$14.75 a hundredweight on live hogs at Chicago became effective October 4. The order does not apply to hogs weighing less than 140 pounds sold for feeding for more than one month; hogs sold for breeding or serum; or any hogs sold by a recognized farm youth organization with prior approval of the Office of Price Administration. Based on present corn and live hog ceilings, the hog-corn ratio is 13.7 at Chicago, somewhat below the present ratio and that of 1942. The War Food Administration also announced that the price of Good to Choice butcher 200-240 pound hogs would be supported at \$12.50 per hundredweight, Chicago basis, for the period October 1, 1944, to March 31, 1945.

Hog slaughter declined contra-seasonally during September. It was 6 percent below August, but 9 percent above September 1942. Receipts of hogs during the first part of September were running below those of August. Sow marketings continued heavy but other old-crop hog sales declined.

Federally inspected cattle slaughter during September was up 16 percent from August, below September of 1942, but above September 1941 slaughter. Calf slaughter increased 23 percent during September 1943.

Slaughter of sheep and lamb during September was up 8 percent from August and was the highest slaughter on record. Heavy marketings of ewes still seemed to account for a large part of the increased slaughter.

The Association of American Railroads announced that the supply of stock cars, both single and double deck,

is expected to be inadequate during peak movement of livestock this fall and winter. The Office of Defense Transportation also announced a program to assure as far as possible, adequate motor transportation. The program permits producers, truckers, dealers, and processors, to set up industry transportation plans locally to accomplish orderly and continued movement of livestock by motortruck.

Cold storage holdings of pork declined 136 million pounds during September while lard and rendered pork fat holdings decreased 65 million pounds during the month.

POULTRY AND EGGS

INCREASED farm marketings of chickens have nearly relieved the tight supply situation prevailing in most live poultry markets in the first half of 1943. Supplies of dressed poultry, however, continued short of market demand at ceiling prices. Prices of dressed chickens at New York in mid-October were from 15 to 32 percent higher than a year ago and dressed fowl from 20 to 31 percent higher. In Pacific Coast markets the demand for both live and dressed poultry exceeds the supply at ceiling prices.

From January to September 1943 egg production in the United States was 13 percent above the same period of 1942. The number of layers on farms in September 1943 was 10 percent greater than a year previous and total egg output in that month was 9 percent above September 1942. Compared with a year earlier all egg prices have been higher. In mid-September the average price received by farmers was 20 percent higher than a year earlier and for the first nine months of 1943 prices averaged 7 and 8 cents higher than in the corresponding period of 1942. The unprecedented consumer demand has kept retail prices well above those of a year ago. In early October, demand for eggs in some wholesale markets exceeded supplies at ceiling prices.

While egg drying operations have

been reduced since June they will be resumed on a large scale on existing contracts in the near future in preparation for heavy deliveries to the Government during the fall and winter months. The 800 million dozens of eggs that will have been used for drying in 1943 represents about 16 percent of the total 1943 estimated United States shell egg production.

On June 1, 1943, storage stocks of poultry were the smallest since 1918. From June 1 to September 1, storage stocks had increased from this low of 21 million pounds to 55 million pounds which is still only 63 percent of stocks of a year earlier and 5 percent below the 1937-41 average for that date.

The demand for baby chicks for commercial broiler production apparently is continuing at record levels. On October 1, the number of chicks on advance order was 98 percent larger than a year ago.

Indications point to 8 to 10 percent more layers on farms at the beginning of 1944 than on January 1, 1943. With this larger number of layers, egg production will probably be at least as large as in 1943.

WHEAT

WHEAT stocks in Canada, United States, Argentina, and Australia, on July 1, 1943, were about 1,770 million bushels, 300 million above the record of a year earlier. On July 1, 1944, these stocks are expected to be down to about 1,250 million, which will still provide for domestic requirements in the various countries until their new harvests, as well as normal minimum carry-over stocks, and still leave over 800 million bushels for exports. This will be considerably more than adequate to take care of next year's total world trade, even at very high levels, without the surplus from the 1944 crop.

Present prospects point to a 1943 world wheat production, excluding the U. S. S. R. and China, about 6 percent smaller than in 1942, reflecting a very large reduction in North America and Australia and offset only in small part

by better prospects in Europe, Turkey, and India.

Suspension of wheat trading on the Winnipeg Grain Exchange and the discontinuance of all purchases of wheat from producers on an open market basis became effective September 28. All future prices and all cash wheat prices of all grades were fixed as at the close of business September 27, and no purchases or sales may be made at other prices. No export sales may be made until further notice. All wheat purchases from now on will be made through the Canadian Trade Minister.

FATS AND OILS

TOTAL fats and oils production for the year 1943-44 is expected to be 11.5 billion pounds. The 1942-43 fats and oils output was 10.6 billion pounds, 12 percent above 1941-42. The estimated 1943 flaxseed production of 51.5 million bushels is now expected to be about 11 million bushels greater than 1942. The peanut crop is indicated to be 600 million pounds above the 1942 crop as of September 1.

The largest July stock decreases of fats and oils were in cottonseed and coconut oil while cold storage holdings of creamery butter and lard increased as did inedible tallow and grease storage holdings.

On the domestic front, with limitation orders and rationing of food fats in effect, 1943 consumption of fats and oils, including the military in this country, will be about 400 million pounds less than 1942. Consumption in 1944 is expected to be at about the same level as 1943. Another factor of increasing importance is the lend-lease purchase of fats and oils which in the first eight months of 1943 was twice as high as the purchases for the same period in 1942. Lend-lease shipments for 1943 including butter are expected to constitute about 11 percent of the total annual production.

From August 15 to September 15, 1943, the average farm price of soybeans increased one cent per bushel, flaxseed increased 4 cents per bushel,

and cottonseed increased \$1 per ton. These September 15, 1943, prices represent increases over the same date a year ago of 60 cents for flaxseed, 12 cents for soybeans, \$6.60 for cottonseed and 1.5 cents for peanuts.

During the balance of 1943 and throughout 1944 prices of fats and oils are expected to continue at ceiling levels because of strong domestic and foreign demands. Lard may drop below ceiling prices during the period of heavy hog marketings next winter but large Government purchases will prevent any protracted decline.

VEGETABLES

TOTAL production of all vegetables is again at a high level this year. Both process and fresh market truck crops are above the 10-year (1932-41) average, even though a little below last year's bumper crop. The 1943 tonnage of truck crops for process is 9 percent smaller than last year but

59 percent larger than average; fresh market truck is 9 percent smaller than last year (primarily because of smaller acreage in 1943), but 1 percent above average.

Field vegetable crop production is much better than truck—27 percent more potatoes than last year, 32 percent more field peas, 16 percent more dry beans, and 14 percent more sweet-potatoes.

The 1943 potato crop, estimated in October, is expected to be nearly 470 million bushels, compared with 371 million in 1942. The expected sweet-potato production of 75 million bushels this year, compares with 65 million last year.

The October estimated 23 million-bag dry edible bean crop for 1943 exceeds the 20 million bags produced in 1942. Dry field pea production in 1943 is estimated to be 9½ million bags as compared with 7 million bags in 1942.

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		September 1942	August 1943	September 1943	Parity price, September 1943
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....dollars..	0.884	0.837	¹ 1.028	1.27	1.30	1.46
Corn (bushel).....do.....	.642	.691	.826	1.09	1.09	1.06
Oats (bushel).....do.....	.399	.340	.433	.652	.606	.658
Rice (bushel).....do.....	.813	.742	¹ 1.563	1.63	1.62	1.34
Cotton (pound).....cents..	12.4	10.29	18.59	19.81	20.20	20.46
Potatoes (bushel).....dollars..	.607	.717	1.077	1.59	1.34	1.19
Hay (ton).....do.....	11.87	8.87	9.03	12.20	12.90	19.60
Soybeans (bushel).....do.....	3.96	.954	1.57	1.68	1.69	1.58
Peanuts (pound).....cents..	4.8	3.55	5.69	7.17	7.15	7.92
Apples (bushel).....dollars..	.96	.90	¹ 1.16	2.16	2.20	1.58
Oranges, on tree, per box.....do.....	¹ 1.81	1.11	1.91	2.75	2.80	1.92
Hogs (hundredweight).....do.....	7.27	8.38	13.57	13.70	14.10	12.00
Beef cattle (hundredweight).....do.....	5.42	6.56	¹ 11.02	12.30	12.10	8.94
Veal calves (hundredweight).....do.....	6.75	7.80	¹ 12.80	13.70	13.50	11.10
Lambs (hundredweight).....do.....	5.88	7.79	¹ 11.90	12.80	12.50	9.70
Butterfat (pound).....cents..	26.3	29.1	¹ 43.1	49.8	50.3	⁴ 43.1
Milk, wholesale (100 pound).....dollars..	1.60	1.81	¹ 2.60	¹ 3.14	¹ 3.21	⁴ 2.72
Chickens (pound).....cents..	11.4	14.9	20.3	25.6	25.2	18.8
Eggs (dozen).....do.....	21.5	21.7	34.7	38.8	41.6	⁴ 40.5
Wool (pound).....do.....	18.3	23.8	¹ 40.1	41.2	41.0	30.2
Tobacco:						
Flue-cured, type 11-14.....cents..	⁶ 22.9	-----	37.0	37.2	36.9	30.9
Maryland, type 32.....cents..	⁶ 22.9	17.6	29.0	60.0	60.0	24.3

¹ Revised.

² Comparable base price, Aug. 1909-July 1914.

³ Comparable base price, August 1919-July 1929.

⁴ Adjusted for seasonality.

⁵ Preliminary.

⁶ 5-season average, 1934-38.

⁷ Base price crop years 1919-28.

REGIONAL PRODUCTION ROUNDUP

AGRICULTURAL production throughout the United States has undergone drastic changes in the last two years. Even further changes are in prospect for 1944.

The Nation's farms are approaching 100 percent production capacity if measured by the number of acres utilized. But even greater capacity is expected as the 380,000,000 acres for 1944 are utilized more intensively and adjusted to meet the tremendous wartime demand for food and fiber products.

This means much higher yields through wider use of fertilizers and better land husbandry because reliance chiefly on favorable weather is not enough. This means shifts to more food crops for direct human consumption because they produce the most nutrients per unit of land, labor, and equipment. This means shifts to oil and fiber crops for industry because they can no longer be imported. This means similar drastic changes all along the agricultural production front. In a word, farming-as-usual is out—out for 1944, out for the duration, out for several years to come.

Here, then, are brief reports on the drastic changes America's soldiers of the soil have wrought in two turbulent years. The Nation's farmers are geared for even further changes in 1944.

What they have done and what they can do is outlined in these reports covering America's four major agricultural regions.

Northeast

TOTAL agricultural production in the Northeast this year will probably exceed the record levels of 1942—a notable accomplishment when considering the late spring, severe summer drought over much of the area, and many other obstacles. Further increases are possible in 1944. But additional programs will be needed to make critical items available.

The record production achievements of 1942 and 1943 were brought about by varying means on different farms and included: (1) longer hours of work, (2) use of more lime and fertilizer, (3) increased livestock numbers, (4) wider use of tractors, combines, milking machines, and certain other machinery, (5) larger inshipments of feed concentrates.

Despite these extra efforts, dairying

in 1943, the leading farm enterprise of the region, probably will not equal 1942 levels. There is real danger that without immediate further attention supporting milk production it will trend sharply downward by the end of 1943. On the other hand, potato production in 1943 is estimated to be the largest since 1934. In addition, the 1943 production of most other commodities important in the Northeast is expected to exceed 1942.

The 1944 food production program for the Northeast probably will call for milk and egg production increases over 1942 and 1943. Increases in the acreages of oil crops and direct food crops such as potatoes, dry beans, and truck vegetables, will very likely be an important part of the program. Adequate quantities of farm labor, lime and fertilizer, farm equipment, together with satisfactory price rela-

tionships, will continue to be vital requirements of the 1944 wartime agricultural production program.

Feed, Chief Problem

Livestock feed will probably be the number one problem of Northeast agriculture in 1944. Farmers in the 11 Northeastern States are now feeding 10 to 11 million tons of concentrates annually. About 75 percent of the total goes to dairy and poultry enterprises. From 65 to 75 percent of the concentrates has been grain and the rest commercial byproducts. About half of the grain and perhaps two-thirds of the commercial byproducts used in the region have been shipped in from other regions. Some short-time adjustments can be made to increase grain production within the region, but by and large, reductions of concentrate inshipments during the war period will result either in reduced livestock numbers or in lowered feeding rates.

The production of whole milk is generally accepted as the most efficient means of converting feed concentrates into food nutrients most needed under present conditions. Recognizing this, the 1944 food production program probably will call for an increase in milk production and for some reduction in meat animals as compared to 1943. These adjustments will bring livestock into balance with national feed supplies, but farmers in the Northeast generally believe that these changes are not likely to occur unless implemented by programs not now in the picture.

Dairy, Poultry Changes

Northeast dairy and poultry producers are already appraising their individual farm situations from the viewpoint of how to meet shortages of feed concentrates. Poultrymen may not have many alternatives but most dairymen have several opportunities to make adjustments. In general, the choice for dairymen is between changing feeding practices and reducing cattle numbers. High rates of

concentrate feeding have been emphasized so much in recent years that many farmers and farm leaders tend to think first in terms of reducing cattle numbers to maintain rates of feeding. In most cases, however, more milk production will be obtained for the national food supply and the individual farmer will make more profit if dairy cattle numbers are maintained or increased and rates of concentrate feeding adjusted as necessary. In the Northeast this will be particularly true if full advantage is taken of the region's natural adaptability to produce roughage.

Fertilizing Pastures

Milk production can be increased in the Northeast, even with decreased supplies of feed concentrates, if full advantage is taken of possibilities for improving the quantity and quality of hay and pasture. A desirable roughage program includes: (1) more legume seedings; (2) greater use of lime, phosphates, and potash on these seedings; (3) more use of nitrogen and mixed fertilizer on hay and pasture sods; (4) better use of farm manure; (5) improved harvesting practices. More favorable price relationships will encourage these practices. In addition, Government programs will be needed to achieve the desired scale.

Use of lime and fertilizers should at least be tripled in the region, and legume seedings should be more than doubled in New England and some other parts of the Northeast. Ready availability of materials at minimum cost will be a great stimulus to their increased use. In addition, if custom plowing for reseeding could be supplied at low cost, on the same basis that has already been used in providing lime and fertilizers under the AAA program, the reseeding will be accomplished much more readily. This is particularly true in such areas as New England where long rotations have been followed and where many operators are not equipped for, or accustomed to, plowing large acreages.

It is very difficult, however, to get a complete roughage program into operation quickly. Some adjustments can be made in the roughage program and in feeding practices in 1944, but production increases of milk and eggs in the Northeast are not likely unless feed shipments are continued at close to 1943 levels. Assurance of adequate supplies of feed concentrates, coupled with higher returns for milk production, will offer reasonable certainty for increases in production.

Milk and eggs probably will find a strong regional demand in 1944 for any quantities that can be produced in the Northeast. Consumers are likely to want, and be able to buy, more of these products than will be available. Facilities for getting the quantities produced to consumers generally seem to be adequate.

Truck Crop Stimulants

Fresh vegetables have encountered temporary market gluts in 1943. This is not an unusual occurrence, but coupled with price ceilings, it has meant relatively unprofitable production of certain vegetable crops of high food value in 1943. With price ceilings but no price floors, the low return during gluts could not be offset this year by high prices during other periods, as they frequently have been in previous years, and so average returns for some crops have been unsatisfactory. Examples are cabbage, snap beans, and spinach. On the other hand, the production of melons, which are "nonessential" crops and not under price ceilings, has been generally profitable this year.

Many opportunities exist for production shifts between different truck crops. In 1944 growers may tend to shift toward those not under price ceilings, particularly those that have been most profitable in 1943. Such shifts will tend to be undesirable from the standpoint of efficient production of essential food nutrients.

Potato production in the Northeast next year will be influenced by farmers'

experience with this year's large crop. In some areas the available storage and transportation facilities are severely taxed. Maine in particular has a very large potato crop—one considerably above the previous 1934 peak. Under wartime conditions and in the short time available, it will be a real achievement to harvest the 1943 crop and to move enough of it to market before freezing weather so that the rest can be handled in available local storage.

Capacity Incentives

A 1944 production program for the Northeast calling for further increases over the record levels of 1942 and 1943 will be attained only by fully utilizing most of the available farm production capacity. Capacity studies have indicated that further increases are possible if critical production items are made available and if additional economic incentives are provided. Special studies in 7 counties, selected to represent the region, indicate that some opportunities to increase production are to be found on nearly all types and sizes of farms. The greatest opportunities are on the larger family-sized farms which now have an annual production volume above 20 war units.

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South

SOUTHERN Agriculture is being rapidly changed by World War II. Food and feed crops important in the war effort have already been greatly expanded and adapted to areas in the South. The total acreage of four important crops in the South—peanuts for nuts, soybeans for beans, sweet-potatoes, and potatoes, for example—has more than doubled, increasing from an average of 3.5 million acres in 1937-41 to 7.2 million acres in 1943.

Total acreage of feed grains and hay crops in 1943, including peanut hay,

has increased by about 5 million acres over the 1937-41 average. This is almost 10 percent larger than during the pre-war period. Acreage of oats, barley, sorghums and all tame hay increased by nearly 6 million acres, but this was offset in part by decreases in corn acreage. Wheat acreage for 1943 was more than 2.5 million acres under the pre-war level as a result of marketing quotas instituted in 1942. Cotton continued its downward trend, the 1943 acreage being about 4 million acres below the 1937-41 average. This reduction was partly due to increased plantings of such crops as peanuts and sweetpotatoes as well as the expansion of feed crops.

Livestock production in the South has shown a marked increase over the pre-war levels. The number of sows farrowing in 1943 is more than 50 percent larger than the 1937-41 level while chicken and egg production is about 40 percent larger. Commercial broiler production reached a record high while milk production is about 10 percent larger. Beef cattle production also shows a substantial increase.

Further Production Shifts

Important further shifts in emphasis beyond the changes of recent years are necessary in order to maximize agricultural wartime production in the South. Continued emphasis will have to be placed on maximizing the production of direct food crops, oil crops, and feed crops.

Livestock numbers will have to be brought more in line with prospective feed supplies. In general, it will be desirable to raise fewer hogs and commercial broilers especially in deficit feed areas where these animals are heavy grain consumers. Reduction in beef cattle numbers down to the carrying capacity of pastures in some areas, particularly in Oklahoma and Texas, seem desirable if not inevitable.

Because of wartime demand continued emphasis must be placed on milk and egg production throughout the South. Much more fluid milk is

needed in the region to meet the requirements of the increased military population and civilian demands.

To meet wartime needs in 1944, cropland must be used more intensively. The total acreage of crops can be increased mainly by increasing the acreage of double-cropped land, by greater utilization of land idle in 1943 and to some extent by bringing of new lands into use.

Oil Crop Increases

Peanut acreage can be expanded further in 1944. The bulk of the increase would occur in Alabama, Georgia, Oklahoma, and Texas. In the Southeast, expansion would occur largely in the Coastal Plains sections. In the Southwest, largest increases would appear possible in the East Texas Sandy Lands and in the Oklahoma Cross Timbers section. Because cotton yields in these areas are usually low and the staple produced below the average, shifts from cotton to peanuts are considered desirable.

Achievement of the increase in peanuts will require active substitution for cotton in most of these areas as peanuts and cotton compete for labor at the same seasons of the year. In addition to the displacement of cotton, there must be an expansion in total crop acreage in most of these areas. Further increases in peanut acreage are possible also in the Coastal Plains section of North Carolina, South Carolina, Arkansas, Mississippi, and Louisiana. Because much of the possible increase would occur in relatively new areas of production, certain problems should be given continued attention in order to facilitate the expansion. These problems deal chiefly with machinery for harvesting, and plans for assembling and marketing the crop.

Soybeans are an important commercial crop in two areas in the South—the Virginia-North Carolina area and the Mississippi Delta. In these areas soybeans fit in as a supplemental enterprise on the larger farms

and the acreage has expanded rapidly. The major limitation to further expansion in 1944 in the Virginia-North Carolina area seems to be lack of combines for harvesting. In the Mississippi Delta a larger soybean acreage in 1944 probably will need to be fitted around a larger cotton acreage. However, it would seem possible to increase moderately the acreage of both soybeans and cotton in these areas.

Necessary Cotton Shifts

Cotton stocks on August 1, 1944, probably will be about 10 million bales. Despite this comparatively large carry-over in prospect for the end of the current season, much of it will be in the lower grades and shorter staples. Supplies are unbalanced with the carry-over of very short cotton disproportionately large in terms of current disappearance. No material correction of this situation is in immediate prospect. But to improve it, cotton producers throughout the Belt will have to make a concentrated effort to improve the grade and staple length of the 1944 crop.

Shifts in cotton acreage among areas in 1944 will maximize food production and improve the quality of the cotton crop. Farmers in areas where alternatives to cotton production are good and where the quality of cotton produced is low are encouraged to shift to the better alternatives. On many farms, however, there are no adapted crop enterprises which are attractive compared to cotton. On these farms cotton should and probably will be increased, if labor is available. In such areas as the piedmont of the Carolinas and Georgia, for example, many farmers may be expected to grow somewhat more cotton. These areas have few alternatives; they have enough labor to "get by," and generally produce grades and staple lengths of the type most needed. Increases in the acreage of cotton in the alluvial acres will increase the average staple length of the total supply and give more cotton per unit of

input. Yields of all crops are high in the alluvial areas but considering lint, oil and meal, cotton generally is the outstanding crop.

Larger Wheat, Potato Output

With the suspension of marketing quotas the acreage of wheat probably will expand considerably, possibly exceeding the pre-war level. Most of the expansion in the South will be limited to the Southwestern Plains section of Oklahoma and Texas. The largest increase will occur in central and western Oklahoma where wheat apparently represents the best alternative and increased acreages of wheat will fit into the existing farm organizations. An expansion in wheat acreage will require a greater utilization of idle and fallow land and the displacement of some barley and oats, and cotton.

Sweetpotato acreage in the South, increased over 30 percent from 1942 to 1943. Sweetpotatoes represent a desirable supplemental enterprise in many of the hill areas of the South where soil and climatic conditions are favorable to production and where market outlets are available. A moderate further expansion in 1944 should be contemplated to meet increased requirements.

Market demands for the early Irish potatoes were about saturated by this year's production but further increases in the very early and intermediate potato areas would appear justified. Principal increases in the acreage of vegetable crops should probably be in vegetables for fresh market together with a moderate increase in processing crops such as tomatoes and snap beans.

More Feed Production

Livestock numbers are at an all-time high in most of the Southern States and local production of feed will rate high on the priority list for 1944. Corn has been the main feed grain in the South even though yields have been low in many areas. It has been supplemented to some extent by the

feeding of small grains and hay. The pattern of adjustments in feed crops for the South calls for increased feed production by (1) increased attention to practices which will increase yields, and (2) increased acreage of feed crops.

In the era of one-cash-crop-farming, feed crops were more or less incidental and comparatively large acreages were planted to meet the relatively small requirements. Now with a record number of livestock in the South, there exists a real need for higher feed production. Heretofore, farmers have been able to purchase feeds from surplus producing areas whenever necessary. In shipments may be harder to obtain in 1944 and farmers should make a special effort to be self-sufficient wherever possible.

Higher Crop Yields

Feed production in the South could be substantially increased without any change in the acreage of corn or small grains through the use of better land, more fertilizer, and better practices. With prospects for more nitrogenous fertilizer available next year, farmers can increase feed crop yields substantially.

In addition to increasing yields it seems desirable also to increase the total acreage of feed grains materially in most sections. Where use of low-grade land is entailed, experience has demonstrated that small grains and hay crops will generally produce more feed and with less danger of accelerating erosion. In many areas, such as the upper Coastal Plains of Alabama and the Piedmont of Georgia, oats, barley, and wheat produce more pounds of grain per acre than corn; increases in the acreage of small grains have been rapid during recent years. New rust-resistant, higher yielding varieties of small grains adapted to the South have increased the advantage of these crops.

A second consideration in placing emphasis on small grain crops in many parts of the Southeastern, Appalachian, and Delta States is the opportunity of

obtaining a crop of lespedeza or other summer hays after harvesting small grains. This opportunity for double cropping should be given particular emphasis during the coming year.

In the Southwest, adjustments for maximizing wartime food production may require some decrease in the total acreage used for feed crops as compared with the large acreages planted in 1943. The increased demand for wheat together with the greater hazards connected with the production of oats and barley would seem to favor some reduction in these crops to permit a larger wheat acreage.

As a catch crop on abandoned small grain acreage and on the more sandy soils which are not especially well adapted to small grains, grain sorghum represent a desirable feed crop in the western areas. Although some reduction in total sorghum acreage from the extremely high level of 1943 would appear necessary, a continued emphasis on grain sorghums seems desirable.

Dairy, Poultry Outlook

Milk is needed in the South to supply the increased military population in training and the increased civilian demand in manufacturing and other urban centers. A moderate increase in milk production appears possible in 1944. The increase will have to be small because of a shortage of locally produced feed in many areas and the prospective high cost of feed shipped in.

Recent extremely unfavorable weather in some areas of the South have tended to increase the seriousness of the already critical feed situation. This is especially true in Oklahoma, Texas, Arkansas, northern Mississippi, and the eastern half of Virginia. In these areas considerable liquidation of other classes of livestock between now and next year have already been planned in order to conserve feed supplies for milk production, but drought conditions have rendered the plans inadequate. Either

these liquidations will have to be increased markedly or in shipments of feed will have to be increased in order to keep milk production from suffering. Special efforts to secure in shipments of feed to enable farmers to meet minimum fluid milk requirements appear warranted.

There seems to be a possibility of maintaining 1943 record egg production in most areas in the South and even making moderate increases in some areas. A large proportion of the eggs produced are from small farm flocks which provide an efficient supplemental enterprise. Commercial broiler production, on the other hand, should probably be curtailed in most areas in light of prospective feed supplies. The production of broilers is based largely on corn and other feed concentrates acutely needed for milk and egg production.

Fewer Meat Animals

In making livestock adjustments in 1944, southern farmers will generally have to pay particular attention to their feed supplies. A scarcity of corn and other feed grains relative to the plentiful supplies during the past few years will be common.

Reduction below the 1942 level of hog numbers appears necessary in most commercial areas where production is dependent on corn and other feed grains. In areas where severe drought conditions have materially reduced feed crop production the securing of necessary feed for efficient liquidation may present a problem on many farms. On the other hand, farmers producing hogs primarily for home use in areas where animals feed mostly on garbage and other farm waste products, may not find it to their advantage to change the size of their hog enterprise.

In the commercial hog areas of the Southeast where hogs are fattened largely on peanuts, increased peanut gleanings would provide some increase in feed supplies. Marked reductions in these areas will probably be neces-

sary only where the acreage of peanuts for hogging off is reduced.

Adjustments in beef cattle numbers appear warranted in the Southwestern States where it will probably be necessary to reduce cattle numbers in line with the normal carrying capacity of pastures. A considerable part of this liquidation is already occurring particularly in Arkansas and Oklahoma as a result of current drought conditions.

Machinery, Labor Prospects

Expanded agricultural production in the South to meet wartime needs in 1944 will require more labor. Neighborhood cooperation in exchanging labor and machinery will be an essential factor in meeting peak labor demands. Although farmers should try to plan their farming to secure the largest production with as good a seasonal distribution of labor as possible, many farmers will find it necessary to depend more on hired labor for key operations such as digging peanuts, harvesting wheat or picking cotton in order to maximize their output. Programs have been set up to increase supplies of seasonal labor in areas where they are critically needed. Fortunately, machinery supplies in 1944 are expected to be greater than in 1943. More tractors and labor saving equipment will enable the limited labor supplies to go farther.

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Corn Belt

LIVESTOCK adjustments to cope with reduced feed grain supplies and more intensive use of farm land will be the major 1944 production problems of Corn Belt and Lake State farms.

Farms of the five central Corn Belt States—Ohio, Indiana, Illinois, Iowa, and Missouri—and of the three Lake States—Michigan, Wisconsin, Minne-

sota—have done an outstanding job of expanding the production of livestock and livestock products to record high levels during the last two years. Huge reserves of feed at the beginning of this period and favorable weather making possible exceptionally good yields of feed crops in 1941 and 1942 enabled farmers of the region to raise more pigs, feed more cattle, keep more dairy cows and maintain larger poultry flocks than ever before.

During 1943, however, feed grains are used at a faster rate than they are produced. Despite the extraordinary production of feed grains in 1942, the carry-over of these grains at the beginning of the 1943-44 feeding year will be nearly 100 million bushels smaller for the country as a whole than a year earlier. There is no mistaking the fact that a relatively short supply of feed grain will be the outstanding production problem of farmers in this region during 1944.

Harvested acreage of crops increased 2 million acres from 1942 to 1943 in the five Corn Belt States and 400 thousand acres in the three Lake States. Reductions in the acreages of rotation pasture (cropland), permanent plowable pasture and idle land permitted this expansion in the acreage of harvested crops in 1943.

Larger Intertilled Acreage

During the same period farmers also increased the acreage of intertilled crops. In the five Corn Belt States the proportion of cropland used for intertilled crops increased from 56 percent in 1942 to 59 percent in 1943. Comparable data for the three Lake States are 32.5 percent in 1942 and 33.6 percent in 1943.

Expansion of the acreage of intertilled crops in the Corn Belt between 1942 and 1943 resulted primarily from a further increase in the combined acreage of corn and soybeans. Except in Missouri, the total land area used for growing corn and soybeans reached a level in 1943 never before attained. So large an acreage of intertilled crops

is recognized as being in excess of the long-time capacity of Corn Belt soils. In wartime, however, even further increases in the proportion of cropland occupied by such crops may be justified in the relatively level fertile sections.

To be most effective 1944 farm production should mesh closely with the 1944-45 requirements for agricultural commodities. Considering the need for production of individual crops, it is clear that high priority crops such as soybeans, flaxseed, and dry edible beans must have first call on 1944 cropland in areas where these crops are produced. In the event that adequate acreages cannot be grown in these areas expansion of the crops into new areas will be necessary.

Oil and Bean Crop Increases

Soybean acreage harvested for beans in the central Corn Belt and Lake States in 1943 increased only slightly—3 to 4 percent—above the acreage harvested for the same purpose a year earlier. Small gains in acreage were registered in all Corn Belt States, except Illinois, but these were partially offset by reductions in acreage in the southern areas of the Lake States. Further expansion of soybean production is needed in 1944.

Farmers in the Corn Belt will be depended on to accept the major responsibility of increasing the 1944 acreage of soybeans. As opportunities for materially expanding production of this crop in areas of the eastern Corn Belt are limited, most of the necessary expansion must come in the level farming areas of the western Corn Belt. To permit the required expansion of soybean production in these areas farmers will find it necessary to reduce the acreage of small grains as well as sod crops.

Anticipated requirements for linseed oil late in 1944 and 1945 call for the production of about the same total acreage of flaxseed in 1944 as in 1943. Flaxseed is important to the region only in Minnesota and to a much lesser

extent Iowa, yet the acreage of the crop grown in these two States in 1943 was 2.1 million acres, approximately one-third of the national flaxseed acreage. Between 1942 and 1943 the acreage of flaxseed grown in Iowa and Minnesota increased 12 percent.

Some expansion above the 1943 acreage of dry edible beans will be necessary in Michigan next year to assure sufficient quantities of food crops higher in protein. Farmers of the dry edible bean producing area of Michigan already have expanded the production of dry edible beans considerably above pre-war levels. Greater production in 1944 can be obtained, however, by growing small acreages of beans on many farms along the fringe of the established producing area.

More Feed Essential

After making a place in their 1944 crop plans for the required acreages of high-priority crops, farmers will seek to maximize the production of feed. Corn produces more feed per acre in most areas of the Corn Belt than any of the other feed grains. Opportunities for further expanding the acreage devoted to intertilled crops varies widely among farms. In some instances an expansion of both soybeans and corn will be justified. When considering this problem farmers will want to examine the extent to which deterioration of soils would be accelerated by increases in the acreage of corn, how total labor and power requirements and their distribution would be affected, and the adjustments that would be necessary in acreages of other crops as well as livestock enterprises.

An appreciable expansion in corn acreage in 1944 will mean a reduction in the acreage of small grain and sod crops. Decreases in the acreage of sod crops during the last two years have been offset by unusually good yields of hay and pasture. Less favorable conditions for the production of hay and pasture in 1944, coupled with

reduced acreages of these crops will reverse this situation and culminate in conditions requiring some downward adjustment in numbers of roughage-consuming livestock. Maximum use of high-yielding hay and pasture crops in 1944 and subsequent years would lessen the need for reducing numbers of roughage-consuming livestock.

Dairy, Poultry Changes

Maximum production of food nutrients per unit of feed fed to livestock becomes ever more important as the supply of feed available for livestock dwindles. Special consideration will have to be given to the efficiency with which different classes of livestock utilize feed in producing human food.

Milk ranks highest from this standpoint when all solids are utilized in human food. Eggs are only slightly lower. The requirements for milk and eggs in 1944 also make it desirable that production of these products be increased in 1944.

The number of milk cows in the region was larger in 1943 than in 1942 by about 2 percent, but total milk production decreased in six of the eight States and about 1 percent in the region because of lower production per cow. Milk production increased only in Illinois and Wisconsin. This downward trend reflects the sensitiveness of dairying in the region to changes in the prices of dairy and other livestock products.

Although increased production of milk will be needed in 1944 and its production represents a more efficient use of feed, farmers in this region probably will not produce more next year unless the relationship between returns obtained from dairying and those obtained from other enterprises, notably hogs, is made more favorable to dairying. On the other hand, some dairy farmers of the region can divert milk solids now being fed in excess to livestock in the form of skim milk to commercial channels.

Egg production in the Corn Belt and

Lake States increased further in 1943 to a level approximately 13 percent above 1942. Numbers of hens and pullets on farms January 1, 1944, are expected to exceed those of a year earlier by a considerable margin. Because of the prospective feed situation, it is desirable that in 1944 laying flocks be culled heavier than usual to eliminate low producing birds and ease overcrowding in hen houses on some farms. Production of about the same, or of a slightly greater, volume of eggs in 1944 over 1943 will be possible.

Beef Cattle Shifts

Cattle numbers in the Corn Belt are at an all time high. The production of roughage, even though above average, generally is being fully utilized. As the acreage of hay and pasture is further reduced, the total number of cattle probably will have to be reduced. Moreover, a moderate reduction seems desirable in view of the strong current demand for beef.

In the more level fertile sections of the Corn Belt where a larger proportion of the hay and pasture acreage can be utilized for intertilled crops without undue erosion, farmers may find it desirable to reduce considerably their beef breeding herds and to purchase feeder and stocker cattle in the fall to utilize rough feed in the grain fields along with some concentrates. Moreover, where beef cattle compete with milk cows for feed, particularly where the milk solids produced can be used for human food, it probably will be desirable to reduce the number of beef cattle to the extent labor and facilities are available to care for milk cows.

The relative shortage of concentrates will make it desirable to utilize the maximum amount of roughage in the ration for beef breeding herds.

Beef cattle feeding also will be affected in 1944 by the relative shortage of concentrate feeds. Feeder cattle, when fed to a high finish, are less efficient converters of feed grains into human food than most other types

of livestock. Nevertheless, many farms in the Corn Belt have rough feeds which would not be effectively utilized if not fed to feeder cattle. This feed, when supplemented by a limited feed of concentrates, will add both additional pounds and quality to the beef supply. Large quantities of fresh beef are needed the year around. It is important, therefore, that a large number of cattle be put into the feed lot in the fall for marketing as medium to good slaughter cattle in the spring and early summer when the number of other cattle coming to market is seasonally low.

Carrying feeder cattle beyond good grade beef during wartime when feed is relatively short is an undesirable use of resources. After an animal has a moderate finish, additional gains consist chiefly of fat—fat in excess of what is required to make the beef attractive, juicy, and well-flavored. Also, the animal eats less in proportion to its weight, leaving a smaller proportion available after body maintenance requirements for the building of tissue.

Larger Roughage Ratio

Large and relatively thin cattle can utilize large quantities of roughages, especially during the early part of the feeding period. Smaller feeders will grow considerably and it will be desirable to feed them for a longer period of time and also feed more concentrates in the ration. Full concentrate feeding, however, during any part of the feeding period is undesirable in wartime when grain is scarce. Indications are that animals do not completely digest and utilize their feed when full fed on concentrates. But the ration should not be reduced to the extent that sufficient nutrients are not available to give efficient gains.

Cattle feeders generally will make the greatest contribution to the total food supply by selecting feeder cattle of good conformation which are in thrifty but thin condition, and carrying them on roughage and a limited feed of

concentrates. These cattle make more efficient use of feed than lower grade stock. Their total gains are larger, a larger part of the grain is produced on parts of the animal yielding the more desirable cuts of beef, and the distribution of fat is much more desirable, all adding up to a higher yielding, higher grading carcass.

Larger Fall Feeder Sales

A larger proportion of the feeder cattle purchased in 1943 probably will be bought during the fall months than have been in recent years. Strong demand from slaughterers for all grades of cattle during the late winter and early summer months of 1943 pushed up the price of feeder cattle much higher relative to slaughter cattle than usual. This situation is reflected in an 11 percent decrease in cattle on feed on August 1, 1943 compared with the same date a year earlier. Feeder cattle usually sell relatively high during the late winter and early summer with a sufficient seasonal rise in fed cattle prices in the fall to allow feeders a profit. But with ceiling prices on beef, fat cattle prices cannot be expected to increase much during the fall months. They may actually decrease somewhat due to the more plentiful supply of beef and crowded processing and transportation facilities.

It appears that feeders will be unable to pay the usual high prices for feeder cattle during the winter and spring months with the expectation of a seasonal rise in the price of fat cattle in the late summer. Therefore, a larger number of cattle should be put on feed during the fall months and fed for market during the late winter and early summer months to provide the needed supply of fresh beef.

Fewer Hogs

Hog production in 1944 must be smaller than the peak production of 1943. A pig crop about the size of the 1942 crop appears desirable. The relatively short feed supply and the need for more dairy and poultry products make this necessary.

Production of hogs is one of the most flexible enterprises on the farm and to a certain extent farmers adjust the number of hogs they raise according to the amount of concentrates they expect to have available after the minimum requirements of other enterprises have been met. In dairy areas where milk solids are utilized for human food, farmers need to continue to feed their cows for full production thus leaving less grain for hogs. In other sections, to the extent that the grain being fed to cattle and sheep is reduced, additional grain will be available for hog production.

Same Sheep Numbers

Sheep in the Corn Belt and Lake States are in relatively small flocks and it appears desirable to maintain numbers of stock sheep in 1944 at about the present number. Sheep feeders probably will find it desirable to slightly reduce the feed of concentrates and carry feeder sheep and lambs only until a moderate finish is reached.

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West

IN 1943 Western State farmers expanded their acreage of land in all crops by 4½ million acres. It is possible to expand this cropland acreage still further in 1944. This year they are producing record quantities of flaxseed, dry edible beans, dry field peas, and potatoes, all of which were requested in increased quantities in the 1943 food program. They are producing more rice, more cattle, more poultry and eggs than in any previous year, but held down their wheat acreage in accordance with the program.

More Wheat Once Again

One of the major impacts on the 1944 production plans of western farmers is the need for more wheat.

Farmers in the Great Plains States, from North Dakota to Texas, have been asked for an 11 million acre wheat increase—three-fourths of the total 14 million acre increase requested of all farmers in 1944. Attainment of the wheat acreage requested in these States will require increased wheat planting equal to nearly 10 percent of the acreage used for all crops in 1943. Yet national food requirements probably will necessitate the maintenance or an increase in the acreage of other war crops in these and the other Western States. Increased wheat plantings for 1944 have also been requested in the other Western States.

Idle Land Uses

Most of the total expansion in Western crop acreage this year was on cropland idle since the drought period of the thirties. Other expansion resulted from decreasing summer fallow acreage and some through the plowing up of native sod. Estimates developed recently in an analysis of production possibilities indicate that another 8 to 9 million acres of idle and fallow cropland and from 1 to 2 million acres of rotation pasture and native sod can be cropped in the 17 Western States. To go beyond that point would in the long run reduce total output and cause accelerated erosion. A comparison of these estimates with the 11½ million acres of increased wheat plantings requested in the 17 Western States indicates an extreme pressure for cropland if the other crop acreages are to be attained.

Some flexibility may be found in summer fallow acreage. In certain areas where seeding conditions are favorable the acreage retained in summer fallow can be reduced with little danger of sacrificing production in future years. But acreage goals reflect production requirements and in areas with unfavorable moisture conditions for seeding, wheat planting should not be expanded to a point where there is little chance of increasing production.

Flaxseed, the major oil crop in the West, is one of the vital crops which may have a substantially lower acreage than needed unless western farmers take precautions to reserve sufficient acreage for it. The production of flaxseed is concentrated largely in the Dakotas, Montana, and Minnesota. It is grown for the most part in direct competition with wheat and it is generally planted after wheat seedings are completed.

Possibly Less Flax

The record acreage of nearly 6.3 million acres of flaxseed planted in the United States in 1943, together with favorable growing conditions during 1943, assures a record production. However, a substantial portion of the increased 1943 seedings were a result of unusual circumstances prevailing in Montana and the Dakotas. An unfavorable planting season for wheat and an abnormally favorable planting season for flax, a large abandonment of winter wheat acreage, the removal of restrictions in new sod breaking for the first time in several years, and the availability of idle land which, when burned over, was suitable for planting flax, were all unusual factors tending to increase the 1943 acreage. Because these factors cannot all be expected to prevail in 1944 and because flaxseed production in the West is generally more hazardous than wheat, farmers may tend to increase wheat acreages at the expense of flaxseed.

More Field Peas

Dry field peas may also encounter some competition from increased wheat seedings for 1944, although to a lesser degree than will flaxseed. Significant quantities of dry peas are produced in irrigated areas throughout the central and northern portions of the Intermountain States but the bulk of their production is concentrated in the dryland areas of western Idaho and eastern Washington and Oregon.

It is largely in the latter areas where

opportunities remain for expanding acreages beyond the record 1943 level. Here, by substituting peas for fallow, dry field pea acreages can be expanded materially even after making allowance for the requested increases in wheat acreage and for alternating peas with grains in order to prevent excessive erosion and weed infestation. This practice will result in only a nominal reduction in the wheat yields. Some additional labor and machinery will be required because of the tendency to increase labor and machinery peak loads when replacing fallow with peas, but the similarity between wheat and pea production operations will tend to hold machinery requirements to a minimum. Because dry peas are a concentrated protein food which can be easily stored and shipped and which require no processing for human consumption, it is probable that the national food requirements will necessitate a significant increase in 1944 pea production.

Dry Bean Increases

Like dry field peas, dry edible beans are a concentrated, direct food, readily stored and transported. With a large demand for dry beans for military, civilian and lend-lease and foreign relief purposes, it seems likely that even greater production than in 1943 will be required in 1944. Some additional expansion can be made in the Western States but with considerably more difficulty than in expanding dry peas.

The national acreage of dry edible beans in 1943 was expanded by nearly 700,000 acres, or about 31 percent above the record 1942 level. Because labor requirements for beans are relatively low, the very intensive drive for beans in the 1943 war food effort was augmented in the irrigated areas by uncertainty as to the availability of sugar beet labor. Dry beans displaced sugar beets on a substantial acreage of highly productive irrigated cropland, an adjustment which probably cannot be anticipated in 1944.

Bean acreages in 1943 were also increased to new record levels in most of the established dryland bean areas.

A further expansion in bean acreages will be possible in 1944 in irrigated areas but probably will be limited by increased competition from sugar beets and potatoes. Additional expansion will be possible also in established dryland bean areas but some expansion into new dryland areas doubtless will be necessary in order to meet the national requirements for beans. Areas in the periphery of established dryland bean producing areas in the Great Plains States are those which seem best adapted for use as new bean areas. Here, if necessary, beans can displace summer fallow, wheat, or feed crops.

With the exception of side delivery rakes and pick-up attachments for combines, available machinery is readily adaptable to bean production; and elevator machinery can be adapted for cleaning, or the beans can be transported to adjacent areas for cleaning and grading. However, bean production in all dryland areas in the Plains States is hazardous from the standpoint of both production and soil erosion. Farmers producing beans in these areas will need to take special precautions to prevent wind erosion.

More Potatoes, Sugar Beets

Potato and sugar beet acreages will likewise need to be increased in the West in 1944 in order to assure sufficient quantities of these crops. Together with dry edible beans, potatoes and sugar beets will be strong competitors for intertilled acreage in many of the western irrigated areas. Where these crops compete directly some expansion in their total acreage will be possible at the expense of feed crops and wheat. However, greatest possibilities for increases in irrigated acreages of these crops are in the areas where they do not compete directly. A further expansion of potato acreages into western dryland areas is possible, although, as in the case of dryland

beans, it will involve a sacrifice in yields.

Western farmers will make every effort to maximize their feed production in 1944 after making the necessary allowance for increased acreages of high priority (direct food and oil) crops consistent with national needs. In some areas in the western portions of the Great Plains and the drier wheat areas of the Pacific Northwest, this will be accomplished by maximizing wheat production. In areas wheat produces more feed per unit of resources than does any alternative crop.

In the eastern Great Plains maximum feed production will mean more corn, while in the western portions it will mean more barley and grain sorghums. Oats acreage will need to be curtailed in many areas in order to maximize total feed and wheat production. Production possibilities will vary between areas and between farms within the same area and in determining 1944 production plans, each farmer will need to analyze carefully his own situation in relation to national needs. In view of the tightening feed situation, special consideration will have to be given to byproduct production, such as beet tops and pulp, cull peas, wheat and rye pasture, and corn stover.

Expanded Hay Output

At the conclusion of the 1942-43 feeding season, stocks of hay were generally depleted in the Pacific Coast States, Idaho, and Arizona. They had been reduced substantially in the Southwest and in Wyoming. With the exception of California and Arizona where an acute hay shortage has resulted in an expansion of hay acreages, hay production in 1943 in the West has been substantially lower than in 1942 because of reduced acreages and yields. Consequently, western farmers and ranchers will have to both expand their hay acreages and shift to more productive hays in 1944 unless the 1943-44 winter is unusually mild and the necessity for feeding curtailed materially.

Western livestock producers should examine with especial care their place in the all-out war effort. Livestock operators in feed surplus areas will have to decide whether to maintain or increase their livestock production above the abnormally high present level, or to curtail their livestock production somewhat and market a portion of their feeds in order that producers in feed deficit areas might make their maximum contribution.

Dairy, Poultry Shifts

Because of the dairy cow's efficient production of food nutrients per unit of feed and the need for milk and milk products in our national diet, every effort will have to be made to increase dairy production in those areas where all milk solids are utilized as human food. In the Pacific Coast States and in other war industry centers throughout the West, dairy cow numbers and production per cow should be increased. This will require the allocation of greater quantities of both concentrates and roughages to dairy production and some sacrifice in the production of other types of livestock. Care must be taken, however, to maximize the production per unit of feed. In most areas increased use can be made of pastures.

In the more sparsely populated areas of the West where the "red cow" predominates, dairy production should be maintained but it should receive a somewhat lower priority in the use of feed. Here, dairy products are usually marketed in the form of butterfat, the skim milk being fed to poultry and other livestock.

Poultry and egg production in the West has been expanded already to about the capacity of housing and other production facilities. In the Dakotas and Nebraska, laying flocks have been expanded to the point where housing facilities are overtaxed so that production rates have declined materially. In such areas farmers should reduce the size of their laying flocks. Through closer culling and the maintenance of only the more efficient lay-

ers they can maintain or even increase their egg production with considerably less feed. In other western areas, national requirements suggest the maintenance of poultry flocks no larger than necessary to maintain egg production at about the 1943 level.

Less Hog Output

From the standpoint of national needs, hog production in 1944 should take a back seat at the western feed table. In 1943 hog production in the Western States increased to record or near record levels largely because of a favorable hog-feed ratio. The western hog production problem for 1944 is not one of increasing pork production but rather a reduction in both hog numbers and marketing weights. This will release some feed supplies for other necessary uses and some feed grain land for direct food crops.

Farmers in the major western hog States, South Dakota, Nebraska, and Kansas, may be reluctant to curtail hog production. Having started from an abnormally low level, the very marked increase in hog production in these States in recent years has not been sufficient to bring them up to previous record levels. This, together with the fact that these States normally produce both heavy hogs and a surplus of feed grains, may tend to hold hog numbers and market weights above desirable level unless offset by the recent lowered support price.

Fewer Beef Cattle

The major cattle production problem in the West is that of inducing larger than usual, orderly marketings so as to bring cattle numbers in line with probable feed supplies and at the same time provide the quantities of beef and veal needed for both military and civilian consumption.

Cattle numbers in the West have increased during the last 5 years to record or near record levels as a result of favorable range and feed conditions as well as favorable prices. In relation to normal range carrying capacity and feed supplies, cattle numbers appeared

to be excessive a year ago, yet have continued to increase. Western cattlemen have gambled on favorable feed supplies and prices and have won. Now, because of exceptionally large inventories, they are in an excellent position to market the larger quantities of beef and veal needed and at the same time increase their ability to weather price declines and adverse feed conditions. Increased marketing needs have been demonstrated already in the Southwest where drought has left the range short and dry.

Closer Culling

The long over-due closer culling of herds should prepare cattlemen generally for less favorable periods. Production in the areas which are overstocked would be both stabilized and maximized by bringing numbers in line with safe grazing capacities. This also will permit the maintenance of larger feed reserves. Maximum wartime utilization of western range resources requires the allocation of sufficient feed grains, protein supplements and roughages to complement the range forage supply for the optimum number of range cattle. But it cannot permit the allocation of sufficient feed to carry over the number of cattle which can be carried on the range during the most favorable periods.

As contrasted with numbers of cattle in breeding herds, the number of cattle on feed in the Western States has been smaller in 1943 than in the previous year. The feed situation in 1944 will continue to limit feeding operations in these States. Greater utilization can be obtained, however, from the feed available for such operations by feeding limited rations to greater numbers of thin, quality cattle, and marketing them when they have attained a moderate finish. This will tend to facilitate more orderly marketings, as will the use of an increased acreage of winter wheat pasture.

Larger Sheep Flocks

By the end of 1943 stock sheep numbers in the range States are ex-

pected to be at the lowest level in several years. Harassed by shortages of experienced labor, high costs and rationing difficulties, sheepmen in most of the range States have reduced numbers. In some instances complete liquidation of sheep operations has occurred. National meat requirements indicate the desirability of maintaining range sheep numbers at about their present level.

As contrasted with range sheep numbers, farm flocks and sheep on feed in

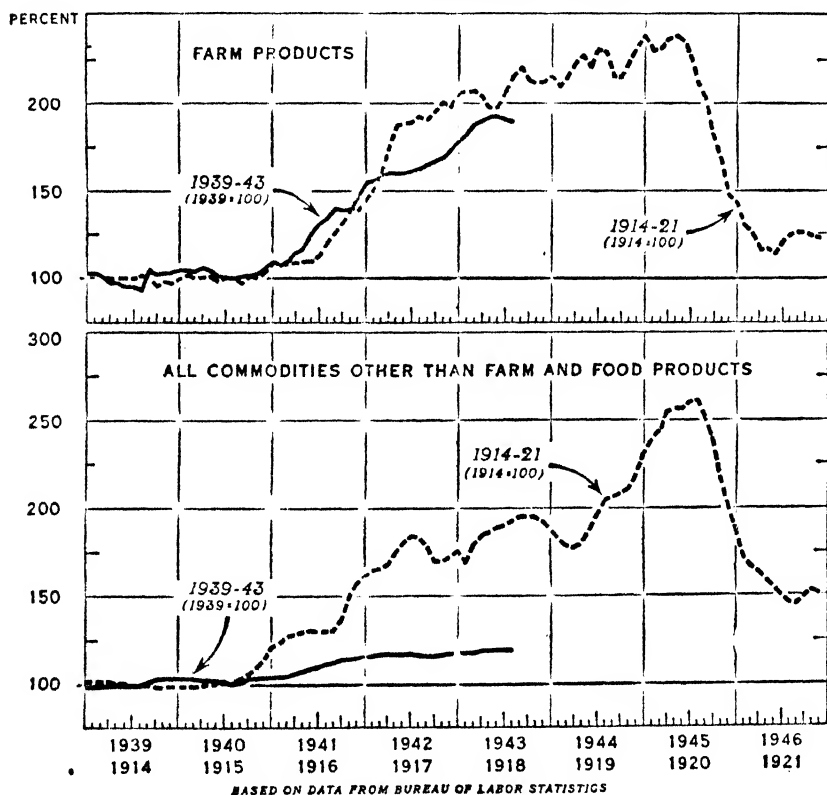
the Northern Plains States, from North Dakota to Kansas, have continued to increase and are now at record or near record levels. Farm flocks are efficient utilizers of waste feeds and to the extent that they do not compete directly for feed with dairy cows, they probably should be maintained at relatively high levels.

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WHOLESALE PRICES OF FARM PRODUCTS, AND OF ALL COMMODITIES OTHER THAN FARM AND FOOD PRODUCTS, INDEX NUMBERS, UNITED STATES, 1914-21 AND 1939-43



U. S. DEPARTMENT OF AGRICULTURE

NEG. 43280 BUREAU OF AGRICULTURAL ECONOMICS

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1935-39=100) ²	Cost of living (1935-39=100) ³	1910-14=100					Prices paid, interest and taxes	Farm wage rates
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in—					
					Living	Production	Living and production			
1925.....	90	126	125	151	163	147	156	169	176	
1926.....	96	131	126	146	162	146	165	168	179	
1927.....	95	127	124	139	160	144	153	166	179	
1928.....	99	126	123	141	160	148	155	168	179	
1929.....	110	134	122	139	159	147	154	167	180	
1930.....	91	110	119	126	150	141	146	160	167	
1931.....	75	84	109	107	128	123	126	142	130	
1932.....	58	58	98	95	108	109	108	124	96	
1933.....	69	61	92	96	108	108	108	120	85	
1934.....	75	76	96	109	122	123	122	129	95	
1935.....	87	86	98	117	124	127	125	130	103	
1936.....	103	100	99	118	123	125	124	128	111	
1937.....	113	117	103	126	128	136	131	134	126	
1938.....	89	91	101	115	122	125	123	127	125	
1939.....	108	105	99	113	120	122	121	125	123	
1940.....	123	119	100	115	121	124	122	126	126	
1941.....	156	169	105	127	131	131	131	133	154	
1942.....	181	238	116	144	154	149	152	151	201	
1942 July.....	178	240	117	144	155	150	153	152	202	
August.....	183	251	118	145	156	150	153	152	-----	
September.....	187	256	118	145	157	151	154	153	-----	
1943 July.....	*203	306	124	151	172	164	169	165	274	
August.....	203	-----	123	151	172	164	169	165	-----	
September.....	-----	-----	-----	-----	172	166	169	165	-----	

Year and month	Index of prices received by farmers (August 1900-July 1914=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cottonseed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925.....	157	177	172	153	141	153	163	156	92
1926.....	131	122	138	143	147	152	159	145	86
1927.....	128	128	144	121	140	155	144	139	81
1928.....	130	152	176	159	151	158	163	149	89
1929.....	120	144	141	149	156	157	162	146	87
1930.....	100	102	162	140	134	137	129	126	79
1931.....	63	63	98	117	92	108	100	87	61
1932.....	44	47	82	102	63	83	82	65	52
1933.....	62	64	74	105	60	82	75	70	58
1934.....	93	99	100	103	68	95	89	90	70
1935.....	103	101	91	125	117	108	117	108	83
1936.....	108	100	100	111	119	119	116	114	89
1937.....	126	95	122	123	132	124	111	121	90
1938.....	74	70	73	101	114	109	108	95	75
1939.....	72	73	77	105	110	104	94	92	74
1940.....	85	81	79	114	108	113	96	96	78
1941.....	96	113	82	144	144	131	122	122	92
1942.....	119	155	125	199	189	152	151	157	104
1942 July.....	115	155	131	200	193	144	145	154	101
August.....	115	151	126	256	200	151	156	163	107
September.....	119	156	129	191	195	156	166	163	107
1943 July.....	154	163	230	315	296	178	183	188	114
August.....	155	167	204	308	206	181	193	193	117
September.....	158	171	204	311	207	185	201	193	117

¹ Federal Reserve Board, adjusted for seasonal variation. Revised September 1941.

² Total income, adjusted for seasonal variation. Revised March 1943.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

ANNUAL OUTLOOK ISSUE

THE

AGRICULTURAL

• SITUATION •

NOVEMBER 1943

A Brief Summary of Economic Conditions

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ONCE AGAIN total war dominates the agricultural outlook for the coming year. Over-all demand for agricultural products will continue to exceed present stocks plus next year's increased production. To insure fair distribution of the limited supplies, to prevent the 42 billion dynamite dollars—inflationary purchasing power—from shooting food prices skyward, and to stimulate increased production of the most needed commodities, prices will still be determined less in the market place, more by governmental controls. Four ways to increase output in 1944 are: Larger crop acreages, shifts to more intensive crop and livestock enterprises, improved production practices, more efficient food and feed uses. Government programs will serve as guides, but increased output will be achieved only with a great deal of local initiative and action. Harder work is in prospect for American farmers in 1944, and so is the greatest farm income in our history.

FARM OUTLOOK FOR 1944

AMERICANS in the armed forces and in civilian life will be adequately fed and clothed in 1944. Our own tremendous demands, together with growing lend-lease and foreign relief needs, place greater emphasis than usual upon prospective food requirements. Factors customarily of major importance in the outlook for the coming year have again been crowded aside by wartime problems of production, processing, and transportation of agricultural commodities. The prospects for increased output of the various commodities in 1944 are summarized in the following reports, condensed for the most part from materials used at the Twenty-first Annual Outlook Conference in Washington.

FOOD SUMMARY

WHAT ARE the prospects for food production and consumption in 1944? The end of this year will see a record number of livestock on farms. With a plentiful feed supply, this would set the stage for another big increase in livestock production next year. Although feed supplies will be short, it is now estimated that if feed stocks are reduced to a minimum by October 1944, the feed supply per animal unit will be about as large as the average in 1937-41. This situation will make it difficult to get any significant increases in total livestock output. But with an efficient distribution of the available feed supply, livestock production could be maintained at this year's level.

On the other hand, the acreage of food crops will be increased next year. The War Food Administration program calls for 380 million acres next year—16 million acres more than planted in 1943. The WFA has suggested that a larger proportion of the total acreage than in 1943 be devoted to food crops. Barring serious droughts, floods, or other severe weather, therefore, the total food crop production next year could be 4 to 6 percent larger than this year.

The proportion of the 1944 production to be allocated for noncivilian uses will depend to a large extent on mili-

tary developments. As more Axis-held territories are liberated by the Allies, relief shipments, especially to continental Europe, can be expected to increase. In any event, military and lend-lease requirements next year probably will be at least as great as this year, so that supplies for civilians are not likely to be larger than this year and may be somewhat smaller. At the same time, the civilian demand for food—i. e., the amount which civilians would be willing to buy at prevailing prices—will be equal to, or even greater than, in 1943.

It appears, then, that for the year 1944 as a whole civilians will continue to have an abundant supply of cereals and as large a per capita supply of chickens, eggs, fresh fruits and vegetables, potatoes, dry edible beans and peas as in 1943. Civilian consumption of food fats and oils as a group is likely to be maintained at the ration levels of recent months.

Canned fruits and vegetables are expected to be in smaller civilian supply in the first half of 1944 than in the same period this year, but in the second half the supplies may be larger than in the second half of 1943. Red meats and dairy products, however, are expected to be in shorter civilian supply than this year.

Total food production in 1943 is now estimated to exceed the record production in 1942 by 5 percent and

the 1935-39 average by 32 percent. Mainly as a result of unfavorable weather, this year's production of food crops will be lower than last, but an unprecedented output of livestock products will more than offset the reduction in food crops.

Despite large noncivilian requirements in 1943, expected to average about one-fourth of our total food output, and despite restrictions on consumption through rationing, the average civilian will consume 5 percent more food this year than in 1935-39.

1943 Food Production as a Percentage of 1942, 1941, and 1935-39 Average

	Per- cent of 1935-39 average	Per- cent of 1941	Per- cent of 1942
Food grains.....	108	82	78
Truck crops.....	115	99	91
Fruits.....	104	92	90
Vegetables ¹	126	126	119
Sugar crops.....	88	91	80
Total food crops.....	113	97	91
Meat animals.....	150	127	113
Poultry.....	153	132	117
Dairy products.....	113	103	99
Total food live- stock.....	138	120	110
Total food production.....	132	115	105
Civilian food consump- tion per capita.....	105	95	97
Total agricultural pro- duction.....	128	113	102

¹ Excluding truck crops.

In comparing the civilian per capita consumption in 1943 with that of the pre-war period for the major commodities, this year's consumption of pork, eggs, chickens, fluid milk and cream, lard, margarine, fresh citrus fruit, canned juices, canned vegetables, potatoes, and dry edible beans will be significantly larger than in 1935-39. However, the per capita consumption of beef and veal, lamb and mutton, fresh, frozen, and canned fish, cheese, butter, fresh and canned fruits, and fresh vegetables will be less than in the pre-war period.

The 1943 civilian per capita food supply is richer in all of the essential nutrients than in 1935-39 and, except

for vitamin A and ascorbic acid, the vitamin and mineral content of the foods consumed will be at least as high as in 1941 and 1942.

And further, the higher incomes and rationing of the major food items has brought about a more equitable distribution of the 1943 civilian supply than in the recent past.

DEMAND-PRICES-INCOME

FOR THE second successive year, 1944 will witness the greatest demand ever known for agricultural products. In 1944 civilian incomes will be larger with a resultant increased demand, the needs of our armed forces will be greater, lend-lease requirements will be larger, and foreign relief requests will be substantially greater. Although military developments will govern the extent of the demand for American farm products, it is reasonably certain that 1944 requirements will be larger than this year. The over-all need for American produced food will exceed the present productive capacity of American agriculture.

Although total civilian employment in the United States is likely to be slightly smaller in 1944 than this year, incomes will probably be higher. This is accounted for largely by the expected upgrading of employees who replace those inducted into the armed forces. Thus the hourly and weekly earnings of many will increase. Consumer incomes in 1943 are expected to total about 142 million dollars, twice the 1939 total, while the 1944 prospects point to a 10-percent increase over 1943.

About one-fourth of our food production is allocated to military, lend-lease, and other special needs this year compared with 14 percent in 1942 and 6 percent in 1941. Our armed forces are still growing in size, so that military demands for food are increasing. In addition, foreign food needs are increasing as more occupied territories are liberated by the Allies.

Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products ¹
1942			
January.....	149	145	103
February.....	145	147	99
March.....	146	150	97
April.....	150	150	100
May.....	152	151	101
June.....	151	151	100
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	169	154	110
November.....	169	155	109
December.....	178	156	114
1943			
January.....	182	157	116
February.....	178	159	112
March.....	182	160	114
April.....	185	162	114
May.....	187	163	115
June.....	190	164	116
July.....	188	165	114
August.....	193	165	117
September.....	193	165	117
October.....	192	166	116

¹ Ratio of prices received to prices paid, interest, and taxes.

These requirements, together with our own civilian requirements, will make total food demands on American agriculture greater in 1944 than this year. How much larger? This cannot be foreseen now, as the course of military developments will determine the extent of the demand. In general, then, American farmers can look forward with reasonable certainty to a strong demand for all they can produce in 1944.

While prices received by farmers in 1943 will average about 20 percent higher than in 1942, somewhat further increases are expected in 1944. Grain and fruit price increases over last year, for example, have been greater than the average for all commodities, but meat animal prices, on the other hand, rose much less than the average. Because of ceilings on hogs and cattle, it is not likely that 1944 meat animal prices will increase much over 1943.

Government price control and material allocation programs have

succeeded in virtually leveling off wholesale prices of nonagricultural commodities. Their stability is an important factor in holding down farm production costs and thus contributing to increased net income of farm operators. The index of prices paid by farmers (1910-14=100) averaged 152 in 1942 and will probably average about 167 in 1943. A further increase is looked for in 1944 but not at as high a rate as this year.

The decrease in the cost-of-living index between May and September this year is largely the result of roll-backs in the ceilings of certain food items. Retail price reductions in butter, meats, eggs, fruits, and vegetables are the principal ones. The effect on farm prices of the reduced retail prices of butter and meats were offset by Reconstruction Finance Corporation subsidies paid to creameries and meat packers.

Highest Cash Income

Cash farm income, including Government payments, will be close to 20 billion dollars in 1943, about 3.8 billion more than in 1942. While the 1944 income will probably be greater, it will not be as much more as 1943 is over 1942. The 1943 cash farm income sets a new record by exceeding the previous one in 1919 by about 5.3 billion dollars. Because 1943 crop production turned out much better than expected a year ago and because prices farmers received in 1943 are higher than anticipated at that time, the *Agricultural Situation* of last November forecast a 1943 cash farm income much lower than is now probable.

The highly favorable 1943 production means that the quantity of 1943 crops available for sale early in 1944 will be nearly as large as the quantity sold in early 1943 from 1942 production. Hog, cattle, and chicken numbers on farms January 1, 1944, are expected to be the largest on record. Thus total marketings of livestock and livestock products in 1944 may not

differ much from 1943, despite smaller feed supplies per animal unit next year.

Because prices received by farmers will probably average higher next year, the large marketings in prospect for 1944 may bring farmers a 10-percent larger cash income than the high record this year.

Production expenses of farm operators are expected to be a billion dollars higher this year than last, but the net income remaining will be close to 12.5 billion dollars, about 3 billion larger than in 1942. This will be by far the largest net farm income on record, 35 percent higher than in 1919, the peak agriculture year of World War I. Volume of agricultural production for sale and for home consumption in 1943 will be about 40 percent larger than in 1919. Thus, the net farm income per unit of output will be smaller this year than during the peak year of World War I.

Prospects point to substantially higher farm production expenses in

1944 than in 1943. Farm wage rates will be higher. So will prices paid for feed, building materials, and similar items, even though price ceilings have held the prices of many nonagricultural things farmers need at a relatively stable level. With larger quantities of fertilizer available in 1944, expenditures for this item will probably be more than this year. But these higher 1944 expenses over 1943 are expected to be more than offset by the 10-percent larger cash income than in 1943. That is, of course, if production conditions are reasonably favorable. Thus farm operators may look for a 1944 net income even larger than this year.

What are farm people doing with the record-breaking income they are now receiving? Part of it is being spent for better family living. A small part is paying increased income taxes—and 1944 income taxes will probably take a larger share than ever before. Much of it is paying off debts—in the

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		October 1942	September 1943	October 1943	Parity price, October 1943
	August 1909-July 1914	January 1935-Je- 1939				
Wheat (bushel).....dollars..	0.884	0.837	1.035	1.30	1.35	1.47
Corn (bushel).....do.....	.642	.691	.775	1.09	1.07	1.07
Oats (bushel).....do.....	.399	.340	.432	.696	.744	.662
Rice (bushel).....do.....	.813	.742	1.396	1.62	1.70	1.35
Cotton (pound).....cents.....	12.4	10.29	18.87	20.20	20.28	20.58
Potatoes (bushel).....dollars..	.697	.717	1.025	1.34	1.28	1.19
Hay (ton).....do.....	11.87	8.87	9.39	12.90	13.70	19.70
Soybeans (bushel).....do.....	7.96	.954	1.58	1.69	1.80	1.59
Peanuts (pound).....cents.....	4.8	3.55	5.77	7.15	7.05	7.97
Apples (bushel).....dollars..	.96	.90	1.12	2.20	2.08	1.59
Oranges, on tree, per box.....do.....	1.81	1.11	2.44	2.80	2.61	1.92
Hogs (hundredweight).....do.....	7.27	8.38	14.10	14.10	14.00	12.10
Beef cattle (hundredweight).....do.....	5.42	6.56	11.07	12.10	11.80	9.00
Veal calves (hundredweight).....do.....	6.75	7.80	12.80	13.50	13.20	11.20
Lambs (hundredweight).....do.....	5.88	7.79	11.83	12.50	12.20	9.76
Butterfat (pound).....cents.....	26.3	29.1	46.6	50.3	50.7	45.1
Milk, wholesale (100 pound).....dollars..	1.60	1.81	2.87	3.21	3.28	2.84
Chickens (pound).....cents.....	11.4	14.9	19.5	25.2	24.6	18.9
Eggs (dozen).....do.....	21.5	21.7	37.4	41.6	45.2	45.0
Wool (pound).....do.....	18.3	23.8	40.1	41.0	40.7	30.4
Tobacco:						
Flue-cured, type 11-14.....cents.....	22.9		42.4	36.9	41.7	31.1
Maryland, type 32.....do.....	22.9	17.6	29.0	60.0	59.0	24.3

¹ Revised.

² Comparable base price, August 1909-July 1914.

³ Comparable base price, August 1919-July 1929.

⁴ Adjusted for seasonality.

⁵ Preliminary.

⁶ 5-season average, 1934-38.

⁷ Base price crop years 1919-28.

⁸ Does not include dairy feed payments.

3 years 1941-43 there will probably be a net reduction of about 1 billion dollars owed by farm people.

A large portion of the increased income is being saved in one form or another. The years 1941-43 will see an increase of about 5 billion dollars in bank deposits held by farm people. By the end of 1943 farm people will have bought 2 billion dollars worth of war bonds.

With limited supplies of goods and services available next year and with another year of record net income in prospect, it is quite likely that savings of farm families will show another substantial rise in 1944.

FERTILIZER

THE SUPPLY of fertilizer, except for potash, available for food production during the year ended June 30, 1944 will be larger than any previous year. About 12 million tons will be available, compared with 10.5 to 11 million tons consumed in 1943 and 7.8 tons in 1939.

To obtain maximum food production with the supplies available, the War Food Administration has established, under Food Production Order 5, a control system of fertilizer sales by manufactures to local dealers, agents, and eventually to farmers in order to assure equitable distribution. War Production Board has allocated chemical nitrogen and potash materials to insure equitable distribution to fertilizer manufactures. War Food Administration, under Food Production Order 12, has likewise allocated the available quantity of organic nitrogenous materials to fertilizer manufactures.

The total supply of nitrogen available during 1943-44 is expected to be 625,000 tons or 33 percent more than the 460,000 tons consumed in 1942-43. This supply includes 345,900 tons of ammonium nitrate, previously used only in limited quantities in a high analysis solid form because it is being

made available in volume for the first time this year. Domestic production and importation of nitrate of soda is expected to total 805,000 short tons—to be allocated for direct application—and compares with 812,000 tons for similar application last year. Organic nitrogenous material supply is estimated at a minimum of 20,000 tons of nitrogen content, with the possibility of reaching 30,000 tons.

This year's expected superphosphate 18-percent equivalent production of 7 million tons in 1943-44 is 20 percent more than the 5.8 million tons produced last year. Increasing allocations of sulfuric acid will make possible the production of more superphosphate proportionally by the end of the year. Production of treble superphosphate this year is estimated at 275,000 tons.

Potash supplies in 1943-44 will be about 560,000 tons, compared with 590,000 tons in 1942-43 and 461,000 tons in the calendar year 1941. This year's supply includes slightly larger quantities of 50-percent muriate of potash and sulfate of potash-magnesia, about the same quantities of manure salts and sulfate of potash, but smaller quantities of 60 percent muriate of potash than was available last year. Included in the potash supply are about 20,000 tons obtained from miscellaneous sources, such as nitrate of soda, potash, distillery waste, cement food dust, and wood ashes.

Farm Deliveries Now

Although the fertilizer supply for 1943-44 is larger than in any previous year, the greater demand over last year is about equal to the increased supply. This year fertilizer manufacturers began the manufacture of mixed goods in July, several months earlier than usual, in order to accept delivery of materials in monthly installments as made by the primary producers. Many manufacturers' storage bins are now filled, and in order to continue receiving raw materials they must constantly ship their cured mixtures.

Limited labor supplies and storage facilities in the whole fertilizer industry make it necessary for farm operators to apply and accept early delivery of fertilizer. Full use of the greater quantities now forecast can only be realized if the materials are processed and moved to farms at a uniform rate over a 6-month period beginning immediately rather than during the customary 60-day period prior to planting in the spring.

Many manufacturers will be in a position to ship well-cured fertilizer mixtures in November, and nearly all will be in a position to do so by December. Because of wartime storage and transportation difficulties and because of greatly increased demands, it seems highly desirable for farm operators to begin buying their fertilizer in November and December. If they wait to buy it all next spring there will not be the labor and transportation available to move it to farms.

MARKETING AND TRANSPORTATION

PRINCIPAL marketing problems in 1944 will probably be obtaining the labor, materials, and physical facilities necessary to handle, package, process, and transport the anticipated record volume of farm products to be marketed and the adaptation to necessary changes in wartime controls. With demand in excess of supply for practically every farm product, the problem of selling has been temporarily pushed into the background.

Process plant facilities in general will be adequate to handle the large volume of farm commodities remaining to be marketed in 1943 and even to care for still larger output which might be expected with average or better than average weather on expanded acreages in 1944.

Success in handling the large run of livestock this winter depends largely on maintaining an even flow to the slaughterhouses. Oilseed-crushing ca-

capacity is adequate for the country as a whole, but unnecessary transportation could be avoided by further additions to the 25 million bushels of added soybean capacity installed in the Corn Belt this year. Another large late-potato production in excess of storage capacity again next year in Maine, Idaho, and the Red River Valley will mean a repetition of this year's problem unless adequate storage and transportation facilities are provided for in advance.

Processing plant labor for fruits and vegetables was tight in spots this year. The situation will be worse next year unless adequate plans are made well in advance of the season. It may be possible to make greater use of war prisoner labor for this purpose.

After a rapid advance followed by a substantial decline in 1943, marketing margins appear to be fairly well stabilized at present levels, which are near the pre-war level. The immediate future of margins hinges largely on action taken in regard to subsidies and wage rates. Business failures of marketing agencies have been at record lows, and appear likely to continue for some time.

A serious shortage of all types of containers made from wood, paper, fiber, and cloth is threatened unless the labor supply for cutting wood and pulpwood and textile-mill labor is increased.

Tight Domestic Outlook

The transportation outlook for 1944 is spotty. Prospects for ocean shipping have improved greatly due to the favorable turn of the war in the Mediterranean, the reduction in submarine sinkings, and the high output of ship construction. But the domestic outlook is less encouraging.

The general motor transport outlook for 1944 is less favorable than actual conditions have been in 1943. While the railroad outlook is somewhat less critical than the truck prospect, there is little leeway to shift

any substantial volume of freight from trucks to rails. Difficulties facing trucking must be met and solved largely in the trucking field itself if the flow of traffic is to be maintained.

For the months immediately ahead, tires may constitute the principal problem. Synthetic tires are not yet a completely satisfactory substitute for natural rubber in high-speed heavy-duty service. There is no assurance that enough synthetic tires can be produced to go around, not because of a shortage of synthetic rubber, but because of the lack of sufficient tire-making plant, tire cord, and labor. This bottleneck can be broken, but it will take some months under the best circumstances.

For the long pull, the shortage of truck drivers, helpers, and garage mechanics may be a more serious problem to cope with than the tire situation. While farmers generally can drive their own trucks, they will feel the pinch equally with commercial truckers for mechanical service. The need for continued gasoline rationing will make possible adequate gasoline supplies for farmers and other essential users.

Railroad transportation capacity will be limited by the shortage of motive power and certain types of cars, the most important for agriculture being refrigerator and class A boxcars.

FEED

THE TOTAL 1943-44 feed concentrate supply of about 169 million tons is 4 tons smaller than for the 1942-43 season but much higher than the 136 million tons for the 5-year (1937-41) average. Because of record livestock numbers, the concentrate supply per animal unit will be 12 percent less than last season but, by using reserve supplies, will be slightly larger than the 5-year average.

High-protein feed supplies, part of the total, are now estimated to be 11.3 million tons (oil-meal equivalent)

for the 1943-44 season, as compared with 11.2 million tons last season and only 8.9 million tons for the 5-year average.

This year's supply of the four principal feed grains (corn, oats, barley, grain sorghums) is now expected to total about 133 million tons, 11 million tons less than last season but 16 million tons more than the 5-year average. For the year beginning last July more wheat and rye will be fed than for the year previous, and wheat millfeed supplies will be slightly larger.

Although the 97-million-ton hay crop this past season is 8 million tons less than the previous season, the carry-in on June 1, 1943, was 2 million tons larger than a year earlier. Supplies are expected to be sufficient for normal feeding for this season except in the eastern and southern drought areas.

Reserves Now Low

Requirements of the growing livestock population during the past 2 to 3 years have reduced the feed grain reserves accumulated during 1937-39. Since the beginning of 1942, over 125 million bushels of corn and 400 million bushels of wheat have been sold for feed from Government holdings. Even so, total feed grain stocks are still above average, but are likely to be substantially reduced during the present marketing year.

Current consumption of feeds is at a high level, and a larger than usual proportion of the total supply of concentrates probably will be consumed during the first half of the current season. Thus the pinch in feed supplies will become most pronounced next spring and summer. Unless feeds are well distributed and used very efficiently some decrease in total livestock production is in prospect for 1944.

The 1944 feed crop acreage goals call for increases of about 3 million acres of corn and 2 million acres of tame hay. To permit greater pro-

duction of direct food and oil crops, the acreages of oats, barley, and grain sorghums are to be reduced. Even if yields on the suggested acreages are average, feed grain production will be slightly less than 1943, but oilcake and meal output will be greater. Hence, supplies of feed concentrates per animal unit in the 1944-45 season will be about the same as in 1941-42, if, of course, there is no radical change in livestock numbers a year from now.

There will be no marketing quotas for the 1943 corn crop. Although the present corn supply is near the record of last year, livestock numbers are so large, quotas for the purpose of limiting corn sales are not needed for the current season.

Mixed Feed Controls

Commodity Credit Corporation feed wheat sales to feed mixers are now limited to mixed feeds for dairy cows and laying hens.

Soybean and cottonseed purchases and uses are further restricted by recent CCC orders. Soybeans may not be crushed except under contract with CCC. To prevent speculative holdings, purchases of the 1943 crop are prohibited for amounts beyond the requirements of the period ending October 10, 1944. Country shippers, with certain exceptions, are prohibited from holding soybeans in excess of March 31 contract requirements.

Cottonseed inventories held by ginners and other handlers are limited, while persons other than manufacturers, seed dealers, or ginners are prohibited from purchasing 1943-crop cottonseed except for planting. To prevent vegetable-oil waste, purchases of soybeans and cottonseed, in whole or ground form, for use in feed or fertilizer also is prohibited.

A recently revised Food Production Order continues the restrictions on oilseed meal and prohibits the sale and delivery of soybean flour, grits, and similar food products for feed uses. The order also restricts deliveries of

cottonseed meal and cake in less than carload lots under certain conditions and provides for limitations on shipments and general distribution of oilseed meal production if needed.

Feed prices have increased substantially since 1940. Prices of oats and barley have advanced in recent months, but prices of corn and most byproduct feeds are now under ceilings.

DAIRY PRODUCTS

THE 1944 milk production goal of 121½ billion pounds will be achieved only with utmost efforts to offset present conditions tending toward lower production. These efforts will have to be directed toward a 2-percent increase in cow numbers and an average annual production increase of 50 pounds per cow over 1943.

On the other hand, if milk and butterfat prices continue unchanged and if dairy cows do not receive a larger proportion of available feed supplies than in 1943, then both cow numbers and production per cow may decline as much as 1 percent. In this event, next year's milk production may be nearer 116 billion pounds.

Further increases in fluid milk consumption is probable though at a much slower rate because of sales limitations soon to be in effect in nearly all market areas of 50,000 population or over. Production of creamery butter and American cheese may be down as much as 5 percent from 1943, and other products will be in lower volume. Dried skim milk production, however, may be maintained or even increased over 1943 because of the expected diversion from cream to whole milk sales by dairymen.

Rising feed costs have brought the seasonally adjusted milk-feed ratio to the lowest level since the spring of 1940. In addition, dairy feed supplies will probably be smaller in 1944 than in 1943. Price ratios of other livestock products continue relatively

more favorable than dairy products. Consequently, it will be less profitable for dairymen to feed as intensively as in 1943.

Necessary amounts of feed may not be available in feed deficit areas, and other livestock enterprises may compete more effectively for the available supplies of feed. The quality of the labor supply and increased labor costs are further limiting factors of importance to the dairy outlook for 1944.

Regionally, the Atlantic States, the South, and the West have the least favorable factors for maintaining or increasing milk production in 1944. The northeast normally imports large amounts of feed concentrates and so will suffer most from any tendency for feed grains to be used largely where produced. This year's drought areas from southern Pennsylvania to North Carolina and in the South Central States will next year require more than normal in-shipments of feed concentrates and roughage. In the West, feed supplies will be normal or nearly so, but labor shortages will probably be the most important factor in limiting production.

Greater Midwest Gains

Milk production may be most readily maintained or increased in the North Central States, particularly the western part of the region. The relative gain in milk prices over other livestock prices in the region during this year increases the probability that dairy enterprises can successfully compete for the necessary feed. Further extension of markets for whole milk, with the establishing of additional milk-drying facilities in the region, will tend to reduce the scale of hog production as a supplementary enterprise on dairy farms.

The feed payment program, if continued, will be most effective in securing the suggested milk production for 1944 in areas where dairy and other livestock operations compete for feed grown on the same farms, because ceilings on corn prices make it more

profitable to feed corn than sell it. But dairymen who must buy feed are unable to legally offer a price for corn that will induce hog or cattle feeders to sell enough of their corn crop for cash.

WFA Production Aids

The War Food Administration has recently taken a number of steps to improve feed prospects for milk production in 1944. Commodity Credit Corporation feed wheat sales to feed mixers may be used only for feed mixtures for cows and laying hens. CCC also can direct the geographic distribution of 20 percent of the oil-meal supplies if the oil mills do not effect an equitable distribution. WFA has outlined a suggested policy to guide feed mixtures in adjusting their output to meet the production objectives for the different types of livestock. AAA is revising its practice payment schedules to stimulate wider use of pasture and hay as sources of feed. The recent ceilings on hog prices will be a restraining influence on the current practice of hog producers to feed nearly all of their corn and sell very little.

The milk payment program is a favorable factor in helping dairy farmers meet increased labor costs, particularly in areas near war industries. Draft deferment of large numbers of skilled dairy workers, together with the return of many experienced men from other employment, make this phase of the 1944 dairy outlook more favorable than a year ago.

Strong Post-War Demand

Present prospects point to a strong post-war demand for dairy products. If consumer incomes are only at a moderate level the domestic market can comfortably absorb the 14-percent increase in total milk production during the past 4 years. In addition, there will probably be a substantial foreign demand for dairy products for some time after hostilities cease. Scattered information indicates that

continental European milk production, for example, may be as much as a third to half below pre-war levels.

Domestic production shifts are likely to occur in areas where there has been a wartime expansion to meet local fluid milk requirements of greatly increased populations. The output of manufactured products will probably strike a new balance, with higher values placed on those utilizing non-fat solids. In general, it will be some time after victory before the dairy industry will have to depend almost entirely on the domestic market.

POULTRY AND EGGS

PRODUCTION of all poultry products in 1944 is expected to exceed the 1943 record output. Despite the restraining influence of tight poultry feed supplies, egg production may be a little more than 1943, while chicken and turkey meat output will probably be about the same.

As with many other agricultural products, the 1944 cash farm income from poultry and eggs is likely to be slightly larger than the 1943 record high. Although the average price for laying mash in 1944 is very likely to be above 1943, current high egg prices point to a more favorable egg-feed price relationship than average.

An 8- to 10-percent increase over 1942 in hen and pullet numbers on farms at the end of 1943 is in prospect, according to the usual relationship between the number of chickens raised during a season and the number of layers on December 31. Favorable egg prices and record numbers of late birds raised this year will tend to make the increase greater than 10 percent, despite the restraining influences of a prospective tight supply situation for poultry feeds and other factors.

With something like 10 percent more layers at the start of the year, a considerable drop in the rate of production per bird could occur in 1944 without less egg production than in 1943.

A total output as great as in 1943, or somewhat greater, now appears likely. The civilian per capita consumption of eggs in 1944 may be at least as large as in 1943.

Favorable factors affecting the rate of lay per bird in 1944 are the prospective increases in proportion of pullets in laying flocks, probable further increases in laying capacity of new pullets, and the relatively high protein content of poultry feed supplies.

Because the production rate per bird varies materially between regions, the national 1944 average egg production per hen and pullet housed on January 1 will depend on the areas in which heavy or indiscriminate culling takes place. From the standpoint of efficient utilization of feeds, it is desirable that the lowest producers be culled to bring numbers in line with probable feed supplies.

If there are fewer chickens raised during all of 1944 than in 1943, the number of layers on farms may be reduced somewhat from the record high expected in early 1944 but probably not until the second half of the year. The outcome of feed crops in 1944 will be important in determining the number of layers for 1945 and the number of chickens raised in the spring of 1945, because culling of potential layers varies considerably in the fall and early winter.

Egg Prices Steady

Egg prices next spring probably will be at least as high as they were last spring, at that time a little below levels permitted by ceilings, because of continued direct war uses as well as a stronger civilian demand. Prices of eggs to farmers in the second half of 1944 probably will differ very little from a year earlier, in view of the fact that prices of most eggs, except for low grade and small sizes, have been at ceilings most of the time since July 1, 1943.

The relationship between egg prices and feed prices at the farmer level in

the main hatching season next spring may be moderately less favorable. Reduced total feed supplies or a less favorable relationship between feed costs and egg and poultry prices will tend to cut poultry numbers in 1944.

Despite the War Food Administration consideration of requests from vendors for canceling Government contracts to deliver dried egg in November, December, and January, comparatively large quantities of dried egg probably will be purchased during 1944 to meet overseas requirements. Cancellations will be replaced from production and purchases next spring.

Although the number of chickens raised on farms and for broilers may be smaller next year than this, total chicken meat supplies may be about the same, since slaughter from laying flocks may be much greater in 1944 than in 1943. The average price received by farmers for chickens in 1944 will probably be about the same as in 1943.

Turkey raising methods are changing, in that producers are buying an increasing proportion of the poults they start, instead of hatching them from their own eggs. Commercial production of breeding eggs and poults apparently has not kept pace, so that the poult shortage, the primary limiting factor in turkey production, was particularly acute in 1943.

Some indications point to an increase in the number of breeder turkeys to be saved for next year. Allowing for offsetting factors, it appears likely that production of turkey may be about the same in 1944 as in 1943, considerably above the pre-war average.

LIVESTOCK

PRESENT prospects point to a 1944 meat production of about 24 billion pounds, equal to the record-breaking output of 1943. But this large production will not be enough to fully supply all needs in either year. The 1944 military, lend-lease, and foreign-

relief meat demands will probably be about a fourth higher than in 1943. Thus the amount allocated to civilians will be proportionately smaller.

Cattle and calf slaughter in 1943 is expected to be a million head more than last season, even though inspected slaughter may be 1 to 2 million head less. This year's hog slaughter may be about 93 million head, 20 percent above a year ago. The unusually heavy sheep slaughter in the last few months may bring the total 1943 slaughter above the 1942 record.

Record Cattle Numbers

Even though the 1943 cattle slaughter will be the largest on record, cattle numbers on farms January 1, 1944, are expected to be about 3 million head larger than the previous high of over 78 million head on the first of this year. Favorable weather and high feed crop yields during the last 3 to 4 years have encouraged large cattle numbers on farms; but if feed production were to decline to more normal levels, the present large numbers probably could not be supported. In addition, abundant feed supplies, coupled with high cattle prices generally, have tended to restrict the sale of breeding stock in recent years.

A continuation of favorable weather and ample feed crops in 1944 will probably result in increased cattle numbers, even with an expanded slaughter. Thus weather and feed conditions will largely determine the extent of the increase in cattle slaughter next year.

In almost all important feeding States the number of cattle to be fed during the coming winter and spring may be smaller than a year earlier. Causes for the reduction in feeding appear to be associated more with prices than with the availability of feeder cattle. The potential supply of feeder cattle and calves is of near-record size.

Although cattle prices this October were slightly higher than a year earlier, feeders have been uncertain as to what

prices will be next winter and spring under established beef ceilings. The recent order providing for the price stabilization of the various grades of live cattle may resolve some of this uncertainty. Prices of feeders and stockers are now about the same as a year ago, while feed prices have advanced materially.

This year cattle feeders prefer cattle with weight. Calves and steers under 700 pounds are now a smaller proportion of total shipments from feeders to the four leading markets than they were a year ago, and the price premiums on choice yearlings and calves prevailing in recent years are now largely eliminated. But, under the cattle price stabilization order, 1944 cattle prices generally can be as high as in 1943. The prospective strong demand for beef will absorb any supply marketed next year, so that there now is little reason to expect a material price decline next year unless marketings are in excess of processing facilities.

Smaller Pig Crop

The 1943 fall pig crop, because of continued heavy sow marketings from farms, will probably be much less than the 9 million head increase over 1942, or 21 percent, indicated last June 1 by farmers' breeding intentions. In addition, the 1944 spring pig crop may be 10 to 20 percent less than in the spring of 1943 because of smaller feed supplies. Hence hog marketings may be exceptionally heavy during the first 3 months of 1944, but next fall may be below this year. In general, however, total hog slaughter in 1944 may exceed 1943 by 3 to 4 million head, despite the lighter-weight hogs marketed.

If the usual seasonal pattern of hog marketings is followed it is quite likely that processing and transportation facilities will be inadequate and consequently the War Food Administration may be unable to maintain support prices through its meat purchases. Hence it is essential that producers

market their exceptionally large number of hogs in the more systematic manner now recommended. The \$13.75 support price on 200-270-pound butcher hogs is not a guaranteed price to producers—although packers are not allowed to purchase this weight and grade at a lower price—but a price WFA will support through its pork purchases.

Little Hog Price Fluctuations

Hog prices next year will be restricted within rather narrow limits. The upper price limit for all hogs is the \$14.75 ceiling which applies to all hogs, Chicago basis. The lower limit is the \$13.75 support price until October 1944 for Good and Choice butcher hogs, Chicago basis, weighing 240 to 270 pounds, and the \$12.50 support price from October 1944 until April 1945 for the same grade hogs weighing 200 to 240 pounds.

The average price of all hogs at Chicago is generally less than 50 cents under the support prices which apply to Good and Choice grades of specified weights. Thus the extreme range in all hog prices will probably be less than \$1.50 until October 1944 and less than \$2.75 after that time. Sow prices could decline but are not likely to get much out of line because of the expected strong export demand for lard and fat cuts.

Fewer Lambs

The unusually large liquidation of sheep (mostly ewes) in recent months will probably reduce numbers on farms January 1, 1944, to 52 million head. These heavy marketings have been caused largely by a shortage of skilled labor, although there is some difficulty in obtaining concentrate feeds for wintering range flocks. With average weather, the 1944 lamb crop may be 1 to 2 million head smaller than 1943 because of the expected smaller number of ewes on farms and ranches, together with the shortage of skilled labor. Sheep slaughter will undoubtedly be heavy during 1944, but prob-

ably not at the high rate of the past 2 years. Under the present strong demand for meats, sheep and lamb prices probably will continue at or near recent high levels.

The number of sheep and lambs fed during the coming winter and spring will be smaller than a year earlier. While the number fed in feed lots in the Corn Belt States may be about the same as last year, there will be a large reduction in the number fed on Kansas wheat pastures and in nearly all the Western States. Movement of sheep and lambs into feed lots in the eight Corn Belt States was slow during July and August but increased enough during September to bring the 3-month total 3 percent above a year ago.

In Kansas, because of limited rainfall, there is practically no volunteer wheat pasture, and in only a few areas will seeded wheat pastures make sufficient growth to furnish much grazing. Lamb feeding in the Western States and Texas will be materially reduced because of (1) the high prices of feed grains and hay, (2) high asking prices for feeder lambs until the middle of September, (3) reduced acreage of sugar beets, and (4) difficulty in obtaining feeds.

FOOD GRAINS

THE WAR Food Administration program to increase the wheat acreage in 1944 to 67 million acres is about 13 million acres larger than the acreage seeded for the 1943 crop but about the same as the 1932-41 average. If yields are average, this acreage will produce about 840 million bushels—about the same as the 1943 crop.

The 1944 increase in acreage over 1943 is requested primarily because of the large quantities needed for animal feed and alcohol production. Unprecedented livestock numbers on farms makes it necessary to utilize substantial quantities of wheat for

feed, while wheat-grain alcohol is used in the manufacture of synthetic rubber and smokeless powder.

Even with a production of 840 million bushels in 1944, moderate supplies will be available for regular exports, foreign relief, and lend-lease purposes. However, Canadian supplies, on the one hand, though smaller than in 1943, will be adequate to meet large overseas requirements while Argentinian and Australian exportable surpluses, on the other, will be available as the shipping situation is eased.

Larger Wheat Acreage

A 67-million acre goal for wheat involves planting about as much wheat as can be grown after reserving sufficient land for expanding more urgently needed crops and without departing from sound farming practices. The acreage can be expanded without plowing up land which should be kept in grass if cropland idle during recent years is used and if the cycle of crop rotation on some farms is shortened. Demands for food will be imperative for several years, so that sound practices must be followed to insure highest possible yields over a period of years.

The 1944 wheat seeding is expected to be approximately as large an acreage as in the record year of 1937 except in the North Central and Eastern States, where other crops will contribute more to maximum food output. The 1944 program will mean substantial expansion of acreage over 1943 in the Great Plains States from Montana and North Dakota to Texas; somewhat smaller increases in the Pacific Northwest; and about the same or slightly larger acreages in other areas.

Efficient use of the land, even in the principal wheat States of the Great Plains, means that flax, dry beans, potatoes, and grain sorghums in some areas should be given priority over wheat. In the Pacific Northwest, dry peas, dry beans, canning crops, and potatoes should have land priority

over wheat. In the Corn Belt and Lake States, first call in land use should be given to soybeans, corn, dry beans, potatoes, flax, and canning crops. But farmers in the Southern and Eastern States should continue to supply some of the local food and feed needs by planting somewhat larger wheat acreages than this year.

Although United States supplies of wheat for the 1943-44 year are very large and second only to the record supply of the year 1942-43, present prospects point to a disappearance so large as to reduce stocks strikingly by July 1, 1944. In July 1942 stocks reached a record level of 632 million bushels, in 1943 they were 618 million but by July 1944 they are expected to be down to about 300 million.

The large disappearance is being reflected in an increased market demand, which, in the face of reluctant offerings by farmers, has pushed wheat prices to the highest levels in many years. With no large carry-over of old wheat to supplement production in 1944, the supply in 1944-45 will be relatively less than in 1943-44 to satisfy a continued high level of demand, and it is expected that prices may be even higher than in the current year.

Less Rye

Demand for rye has not been increased materially by the war. Production in recent years has been high, and relatively large stocks are on hand. Special emphasis, therefore, has not been placed on rye production thus far in the wartime food production program except in areas where it produces more feed per unit of resources than alternative crops.

The 1944 acreage goal calls for 2.4 million acres of rye harvested for grain. This is about a 17 percent smaller harvested acreage than the 2.9 million acres for the 1943 crop. With average yields, the 1944 acreage would produce a crop of about 27 million bushels. This would provide for the

estimated need of 11 million bushels for food, 8 million bushels for seed, and leave a sizable quantity for livestock feed and alcohol production.

The 1944 rice acreage goal of 1.53 million acres will be about the same as seeded in 1943. With average yields, an acreage of this size would mean a crop of 71 million bushels. This will be enough to take care of estimated needs for food, seed, lend-lease, exports, and still leave a small carry-over at the end of the year. Rice prices are at very high levels, and it is expected that the large rice production will be reached.

FRUIT

TOTAL FRUIT production in the United States in 1944 is likely to be somewhat larger than in 1943. Assuming average weather, reasonably favorable equipment and labor supplies, and about the same fruit acreage as 1943, the 1944 deciduous fruit production will be about 10 percent larger than in 1943, while citrus production will be about the same. Fruit prices in general are expected to continue high, with prices for specified fruits governed by ceilings.

Citrus fruits—chiefly oranges and grapefruit—now constitute about two-fifths of total United States fruit production. Early and midseason orange crops for the 1943-44 season are indicated at 43.7 million boxes, about 18 percent over last season.

California navel and miscellaneous orange crops are expected to total about 18.5 million boxes, about 30 percent more than in 1942-43. Florida early and midseason crops are indicated at 21 million boxes, 10 percent larger than a year earlier. The present outlook for the Valencia orange crops in California is slightly more favorable than a year earlier, but less favorable in Florida.

The 1943-44 grapefruit production, excluding California summer production, is indicated to be approximately

46.7 million boxes, second largest crop on record, only 4 percent smaller than last season's record high. Citrus prices during 1943-44 are expected to continue at or near ceiling levels.

Smaller Fruit Output

Total tonnage of the eight principal deciduous fruits is estimated to be 17 percent smaller this year than in 1942. The record grape crop, with the plum and prune crops combined, however, are larger than a year ago by 16 and 10 percent, respectively. The five other important deciduous crops are lower than a year ago, as follows: Apples, 31 percent; pears, 23 percent; peaches, 37 percent; apricots, 53 percent; and cherries, 37 percent. Production of walnuts, almonds, filberts, and pecans is 10 percent above last year.

Civilian fresh apple supplies for the 1943-44 season probably will be about two-thirds as large as the 31 pounds per capita consumed in 1942-43. The recently established maximum prices for apples are expected to result in a national retail average price of between 10 and 11 cents a pound for the season. Because of the short supply of, and large demand for, apples, prices are likely to remain at ceiling levels. Returns to growers should be the largest in 20 years.

Less Canned Fruit

Total canned pack of deciduous fruits this season will probably be about three-fourths as large as last season's near-record pack. Civilian supplies of canned fruits during the 1943-44 marketing year may be only about three-fifths as large as in 1942-43, but quantities of fruit juices are expected to be somewhat larger.

The 1943 dried fruit pack, mostly raisins and dried prunes, is expected to exceed 600,000 tons, 12 percent larger than 1942. The civilian per capita supply of dried fruits during the marketing year 1943-44 is expected to be about as large as, or slightly larger than, the quantity consumed in 1942-43.

VEGETABLES

COMMERCIAL fresh market truck crop production is estimated to be 9 percent smaller this season than last but about 1 percent larger than the 10-year (1932-41) average. Commercial production of eight important truck crops for processing is also expected to be about 9 percent smaller this year than last, although 59 percent above average.

Growing conditions this season were unfavorable. Severe freezes and cold, wet weather delayed or prevented planting and retarded the growth of truck crops in many areas. Dry, hot weather reduced yields in the late summer. All these factors contributed to lowered production.

Higher Yields Next Year

Yields in 1944 may therefore exceed this year if average growing conditions prevail. Although expected to be equal to, or larger than, this year, the 1944 supplies of labor and equipment will probably continue short of demand.

An unprecedented demand for fresh vegetables is in prospect for 1944. High consumer purchasing power, rationing of canned and frozen vegetables, and limited supplies of many other foods and consumer goods in general are expected to contribute to a strong demand for fresh vegetables. Some increase in acreage is probable, but it is unlikely that 1944 production can be expanded sufficiently to fully meet total civilian and noncivilian requirements.

Demand for truck crops for processing is also expected to be greater in 1944 than in 1943. Some expansion in acreage of processing crops seems likely, and 1944 yields may be substantially above 1943 if growing conditions are average or better. Even so 1944 production will probably not meet total requirements.

The canned vegetable pack from 1943 production is expected to be somewhat smaller than last year's

record pack. Carry-over stocks from the 1942-43 season were small, so that total 1943-44 canned vegetable supply is smaller than a year ago. Civilian supply of canned vegetables during 1943-44 may be only about three-fourths to four-fifths as large as the quantity consumed in 1942-43.

Slightly Fewer Potatoes

Production of potatoes in 1944 may be smaller than the 469-million-bushel record production indicated for this year, unless conditions are unusually favorable. Some acreage expansion is expected, but yields were at a record high this year, averaging 139½ bushels per acre, and may be somewhat lower in 1944 if growing conditions are nearer average.

Requirements for potatoes are expected to continue extremely high. The civilian potato supply during the 12-month period July 1943 through June 1944 is estimated to be about 14 percent larger than consumption during the preceding 12-month period. The supply in the first 6 months of 1944 is expected to be substantially larger than during the first half of 1943.

The size of next year's potato crop, probably somewhat smaller than this year's unless near-record yields are again obtained, will determine the supply during the second half of 1944. Total supplies will probably be larger in 1944 than in 1943. Demand is expected to be more than adequate to absorb these larger supplies, and prices will therefore probably continue to be nearer ceiling levels than support price levels.

Larger Dry Bean Crop

The 1944 dry edible bean crop may exceed the 1943 record 22.2-million-bag crop. An increase in acreage is probable to more than offset lower yields of more average seasons than the high yields of 1943. Largest acreage increases are likely to take place in new dry land areas rather than in established bean-growing areas. Dry bean supplies for the marketing year 1943-

44 (September through August) are substantially larger than in 1942-43; civilian per capita supply is expected to be about one-fifth larger.

FATS AND OILS

TOTAL PRODUCTION of fats and oils from domestic materials may reach 11.3 billion pounds in the 1943-44 marketing year, compared with 11 billion pounds last year and 10 billion pounds two years ago. This upward trend may be halted or reversed in 1944-45. Vegetable-oil output may continue to rise further; but with a reduced pig crop expected in 1944, a decline in animal-fat production is likely beginning next fall.

Some increase in imports of fats and oils and oil-bearing materials is expected in 1944 as a result of improvement in the ocean-shipping situation.

Average yields from the 1944 acreage goals of cottonseed, peanuts, soybeans, and flaxseed will result in a probable output of oil from these four crops of well over 4 billion pounds for 1944-45. This will be about 10 percent greater than the probable output in 1943-44 and nearly 20 percent greater than the 1942-43 production. Production of corn, olive, and tung oils probably will continue to total about 250 million pounds yearly.

Animal-fat production in the United States in 1943-44 probably will reach a peak 5 to 10 percent above the 6.9 billion pounds produced a year earlier. This increase will occur mainly in lard production, reflecting slaughter of the record 1943 pig crop, but animal-fat production in 1944-45 is likely to be lower. With reduced supplies of feed concentrates available, the pig crop in 1944 may be 10 to 20 percent smaller than this year. Marketings of 1944 spring pigs will begin in October next year.

Tallow production will depend largely on the rate of cattle slaughter. With the large number of cattle now

on farms and somewhat reduced supplies of feed concentrates, some increase in slaughter may occur.

In view of the probable large requirements for fats and oils in 1944 and 1945 and the likelihood of some decline in animal-fat production beginning in the fall of 1944, substantial increases in the acreages of soybeans and peanuts are planned for 1944. A 19-percent increase in soybean acreage and 23-percent increase in peanut acreage are in prospect.

The 1943 goal of 5.5 million planted acres of flaxseed was exceeded by nearly 800,000 acres, making the crop the largest ever harvested in this country. A 6-percent decrease in flaxseed acreage is expected for 1944, because maximum capacity for production of this crop probably has been reached when considering the need for wheat and other grains.

Greater Export Needs

Export requirements are likely to expand in the coming year. The food fat supply in continental Europe in 1944 may total only about 7 billion pounds, compared with a pre-war level of approximately 12.5 billion pounds. When the war in Europe ends, a substantial quantity of imported fats will be needed. Part of these imports probably can be obtained from Argentina and other surplus-producing areas, but for a year or two the demand for imports from the United States will be comparatively strong.

Resumption of whaling activities on a large scale would help relieve the European fat shortage, but this cannot be accomplished before the 1944-45 season and may not be achieved before 1945-46.

All fats and oils are now covered by ceiling orders. The index number of prices (1940-14=100) of eight domestic fats and oils advanced from 109 in 1941 to 142 in midsummer 1943. Fats and oils prices are expected to continue at relatively high levels during the balance of 1943, throughout 1944, and probably into

1945. A strong domestic and foreign demand for fats and oils will operate to maintain prices at or near ceiling levels.

Support prices were established by the Government in 1942 and 1943 to encourage production of oilseeds. In 1943-44 all commercial peanuts are to be marketed through designated Government agencies at a price nearly \$20 per ton higher than the average price in 1942-43.

The average soybean price received by farmers in the 1943-44 marketing year is expected to be close to the support price of \$1.80 per bushel for green and yellow varieties. Ceilings on oil and meal will prevent prices from rising much above this level.

The farm price of flaxseed probably will remain close to the level permitted by ceiling prices at terminal markets. At the Minneapolis market the ceiling of \$3.05 per bushel is equivalent to an average farm price of \$2.80 to \$2.85 per bushel. Support prices for flaxseed are approximately 20 cents per bushel below ceiling prices.

Cottonseed prices are supported by agreement between crushers and Commodity Credit Corporation at \$55 to \$56 per ton f. o. b. country shipping points.

In 1944-45 the prices of the four principal oilseeds—cottonseed, soybeans, flaxseed, and peanuts—are likely to be as high as in 1943-44, even if production is expanded further next year.

FIBERS

THE CARRY-OVER of all cotton in this country was 10,656,952 bales on August 1, the beginning of the 1943-44 marketing year. This carry-over is 17,000 bales larger than at the beginning of last season. Domestic carry-over of American cotton increased 64,000 bales from a year ago to total 10,569,000 at the beginning of this season. In contrast, domestic carry-over of foreign cotton dropped

47,000 bales from a year ago to total 88,000 bales at the beginning of 1943-44.

Production estimates now place this year's American output at about 11.1 million bales. Thus the total domestic supply of American cotton for 1943-44 is expected to be 21.7 million bales, about 1.4 million less than for the 1942-43 season.

Larger Cotton Acreage

Present indications point to a 1944 cotton acreage goal in the neighborhood of 22¼ million acres, about one-quarter of a million acres more than planned in 1943.

Although a comparatively large cotton carry-over is in prospect for the end of the 1943-44 season, much of it will continue to be in shorter staples and lower grades. The War Food Administration is urging cotton producers to improve the staple length and grade of the 1944 crop. The longer staple cotton is in much greater demand, and in some parts of the Cotton Belt yields obtained from varieties that will staple fifteen-sixteenths inch and longer are fully as good as can be obtained from the very short staple varieties now grown.

Disappearance (consumption, exports, and destroyed) is expected to be less than last season's total of 12.6 million bales. If consumption totals about 10 million for the full season, the disappearance of domestic cotton may total about 11.5 million bales. This would result in an end-of-season carry-over of about 10.2 million bales, a reduction of about 400,000 bales.

Despite decreased foreign production in both 1941 and 1942, the world carry-over of foreign-grown cotton has increased each year since 1939. In foreign countries, the carry-over has increased by about 5 million bales. On the other hand, world consumption of foreign cotton has declined each year since 1938-39. As a result, the estimated 1943 carry-over of about 12½ million bales of foreign grown cotton

is the largest on record, about two-thirds larger than in August 1939.

Shorn wool production in 1944 may be slightly smaller than the 377-million-pound 1943 production, because of a reduction in sheep numbers. Pulled-wool production in 1944 will probably be about the same as in the past 2 years about 67 million pounds.

Mill consumption of apparel wool has been at a record level since 1941 as a result of larger military requirements. Consumption in the year ended June 1943 totaled 1.1 billion pounds, compared with 1.0 billion pounds in 1941-42 and a 1936-40 average of 600 million pounds. Although domestic production has been at record or near-record levels in the last few years, large mill requirements have made it necessary to import large quantities of foreign wool. Wool stocks now on hand in this country are large.

Prices of domestic wools have been close to ceiling levels since December 1941. Under a Government purchase program set up for domestic wools in April 1943, growers are paid ceiling prices, less freight and handling charges, for all wool sold to the Commodity Credit Corporation.

TOBACCO

PRESENT prospects point to a 1944 domestic tobacco production considerably above the 1.4 billion pounds produced in 1943. Individual farm marketing quotas and acreage allotments for burley and flue cured will be increased 20 percent above 1943. There are no quotas or allotments for other types of tobacco.

The continued strong demand, together with this season's high crop prices, will, of course, be another stimulant for increased plantings next year. In most areas available land will be adequate for expanded acreages. More fertilizer, except potash, will be made available to farmers next year than this year. Two restraining influences against increased production,

however, will be local labor shortages and continued pressures for larger food crop output.

Over-all disappearance of domestic leaf will reach an all-time peak in 1943 and may be slightly higher in 1944. Because of this high level of disappearance and because the 1943 production was 1 percent less than 1942, present stocks of most types of leaf are smaller than a year ago.

This year's cigarette consumption, both military and civilian, will be at the highest level on record and may continue upward in 1944. Following the usual pattern of rising income, the

consumption of snuff and chewing tobacco has increased since the outbreak of war.

On the other hand, the 1943 consumption of cigars and smoking tobacco, as indicated by revenue stamp sales, is below 1942. Byproduct uses, such as nicotine sulfate, will be about 23 million pounds in 1943.

The 1943 production of flue-cured tobacco at 782 million pounds compared with 812 million in 1942, but burley production is 390 million pounds this year as against 343 in 1942. Other type output is 229 million for 1943, compared with 258 in 1942.

FARM MACHINERY IN 1944

UNDER LIMITATION order L-257, issued June 15, farm machinery manufacturing program in the year ending next June 30 provides for production of about 80 percent as much farm machinery as was produced in 1940. Compared with 1940, larger production quotas are provided for harvesting equipment than for other classes of farm machines. For example, the program for tractors calls for manufacture of about 55 percent of the 1940 total, planting equipment about 85 percent, and harvesting equipment about 110 percent.

Apart from the higher level of production permitted by the L-257 program, compared with last year's, several other factors assure a more timely flow of machinery in the year ahead than in the first 18 months of the war.

The Controlled Materials Plan, which on July 1 succeeded the Production Requirements Plan, is designed to control requests for materials and to match requests with available supply. In addition, manufacturers now are required to schedule monthly production of each machinery item and to report its schedule and any subsequent changes to the War Production Board. This information enables a check on manufacturers' actual production and

places WPB in position to transfer all or part of any manufacturer's quotas in case it is evident the manufacturer cannot reach the quotas.

Sufficient quantities of steel and other needed materials, it is reasonably assured, will be made available to complete production of the L-257 program. An allotment of 300,000 tons of carbon steel was made for the third quarter of 1943 to complete production authorized under the 1943 L-170 program and to commence production July 1, 1943, under the L-257 program. Approximately 245,000 tons were made available for the fourth quarter. Until allotment of steel is made for the first and second quarters of 1944, the exact quantity of farm machinery to be produced under L-257 cannot be predicted.

The following discussion summarizes the method employed by the War Food Administration in determining, item by item, the Nation's farm machinery requirements for 1944. These requirements, adjusted to expected material allocations, are the basis for L-257 manufacturing quotas.

In March 1943 the Director of the Food Production Administration requested each State USDA War Board to report its State's 1944 requirements

for each important item of farm machinery. In large part, these reports were conservative. They were based upon the principle that in the present world crisis only those efforts should be carried on which have a direct bearing on the successful conduct of the war; and that every farm should confine all efforts to those crops and livestock which are contributing directly to the food programs and dismiss all possible work which could be postponed until the crisis in food production is safely over.

As a basis for compiling estimates of machinery needs in individual States, farmers in each county were supplied with a "Farm Plan Work Sheet" and requested to answer the following questions:

1. What farm equipment, if any, you do not now possess and the services of which you cannot obtain through loan, hire, or contract, is vitally essential to you in your production operations?
2. Without such equipment, what crops, livestock, or livestock products will be affected?
3. Was the operation for which this equipment is needed performed last year?
4. What serviceable machines now on your farm will not be used by you in 1943?
5. What serviceable machines, now on your farm, will be available for rental or contract use in 1943?

Answers to these questions were summarized by County War Boards and they, in turn, made the information available to their State War Board to use in determining State needs for farm machinery in 1944. In arriving at the numbers of the more important items of equipment needed, State War Boards consulted with other qualified persons. They were guided by a recent Bureau of Agricultural Economics report of the numbers of implements on farms, their age, and amount of work done in a season. This information is available for each of the 48 States.

A narrative analysis of the machinery situation, based upon answers obtained to questions 2, 3, and 4 of the "Farm Plan Work Sheet," was submitted to Washington by most State USDA War Boards. Throughout these summaries the scarcity of farm labor was repeatedly discussed. The labor situation, of course, was a major factor increasing the need for farm machinery. Committees in the War Food Administration edited and summarized the State reports and, using them as a base, arrived at national requirements for each item of farm machinery. Specialists in the Department of Agriculture and the War Production Board were consulted in considering these requirements.

Factors Considered

Numerous factors had to be taken into consideration in arriving at final figures for the 1944 farm machinery program. Those having the greatest influence on the decisions of County and State War Boards, as well as those working at the national level, were: 1. Replacement requirements; 2. Need for tractors and complementary tractor equipment to offset decrease in horse and mule population; 3. The influence of the critical labor situation on the need for labor-saving equipment; and 4. Shifts in cropping and livestock production patterns to meet war demands.

Replacements were kept at a low level in determining requirements for individual items or groups of items of farm machinery. Because of the vast amounts of critical materials needed for producing planes, ships, and tanks, and because of intensive repair programs for farm machinery, the estimated need for replacement was not allowed in any case to exceed 4 percent of the total farm inventory. The rapid expansion in use of tractor power has materially lessened the need for horse drawn equipment. Furthermore, a number of items of tractor or tractor drawn equipment are so new that replacements may very well be kept at a low level for a year or two.

Nearly half of the total drawbar power on farms is furnished now by tractors. Since 1935 the numbers of tractors on farms have nearly doubled, and the numbers of horses and mules have declined by more than 3,250,000 head, or about 21 percent. In the same period, the acreage of cropland harvested has increased by about 25,000,000 acres, or 7 percent. Consequently, the equivalent work animal unit per 100 acres of harvested cropland is the lowest since 1935. The decline in numbers of horses and mules has ranged from 640,000 in 1937 to 141,000 in 1942, and because the colt crop decreased considerably in 1941 and 1942, the decline this year is expected to be as much as 250,000. Along with the decrease in numbers of horses and mules on farms, their average age has steadily increased. Approximately 39 percent of the horses and mules now on farms probably are over 15 years of age.

Fewer Horses

The decline in numbers of horses and mules on farms and the very rapid increase in numbers of tractors have had a decided influence on the type of equipment needed. Recent rapid expansion in purchase of farm tractors has developed a decided demand for complementary tractor equipment. At the same time, the decline in numbers of work stock has decreased materially the need for horse and mule drawn equipment. Furthermore, at the period when the expansion in tractors on farms was at its height, namely, 1940-41, many farmers did not purchase a full set of complementary equipment. Since that time, opportunity to purchase it has been restricted, with result that there is now a more than normal demand for such equipment.

The Bureau of Agricultural Economics labor reports show that the present supply of workers lack the skill of the seasoned workers who have left the farm. It was indicated in a June report of BAE that about 13

percent of farm workers on June 1, 1943 were under 14 years of age as compared with 4 percent on April 1, 1942. It also shows a sharp increase in the percentage of females working on June 1, 1943 compared with April 1, 1942.

The farm labor situation, especially the lack of skill of many of those remaining on farms, is closely related to the comments by various State War Boards concerning the need for labor-saving equipment. Especially in highly industrial areas, where much farm labor has been drawn into war industries, some War Boards reported that farmers might have to curtail food production unless additional machinery could be obtained.

More Machines Needed

Requirements for individual machinery items in the 1944 program are pointed to the agricultural production goals for 1944. The level of agricultural production that can be attempted in 1944 will be determined to a large degree by the adequacy of farm equipment. Needs for food and fibre in 1944 will require adjustments to new farm enterprises in many areas and necessitate new equipment. Substantial need for more combines, corn pickers, peanut equipment, and other items of mechanical equipment is evident in these adjustments.

Agricultural production in 1943 is expected to be about 37 percent higher than in 1935. This increased production is largely in livestock and livestock products and in a shift from extensive to intensive crops. A volume of production larger than in 1943 is needed and will be attempted in 1944, which clearly points out the increased need for farm power and agricultural equipment.

Compared with the 1943 planted acreage, the 1944 wheat acreage goal of 67,000,000 acres represents an increase of 24 percent. This needed increase of about 13,000,000 acres of wheat will require new tillage and planting as well as harvesting equip-

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935- 39= 100) ¹	Income of in- dustrial workers (1935- 39= 100) ²	Cost of living (1935- 39= 100) ³	1910-14=100					Farn wage rates
				Whole- sale prices of all com- modi- ties ⁴	Prices paid by farmers for commodities used in—			Prices paid, interest and taxes	
					Living	Produc- tion	Living and pro- duction		
1925	90	126	125	151	163	147	156	169	176
1926	96	131	126	146	162	146	155	168	179
1927	95	127	124	139	160	144	153	166	179
1928	99	126	123	141	160	148	155	168	179
1929	110	134	122	139	159	147	154	167	180
1930	91	110	119	126	150	141	146	160	167
1931	75	84	109	107	128	123	128	142	130
1932	58	58	98	95	108	109	108	124	96
1933	69	61	92	96	108	108	108	120	85
1934	75	76	96	109	122	123	122	129	95
1935	87	86	98	117	124	127	125	130	103
1936	103	100	99	118	123	125	124	128	111
1937	113	117	103	126	128	136	131	134	126
1938	89	91	101	115	122	125	123	127	125
1939	109	105	99	113	120	122	121	125	123
1940	125	119	100	115	121	124	122	126	126
1941	162	169	105	127	131	131	131	133	154
1942	199	238	116	144	154	149	152	151	201
1942—August	204	251	118	145	156	150	153	152	
September	208	256	118	145	157	151	154	153	
October	215	262	119	146	158	151	155	154	220
1943—August	242	⁵ 311	123	151	⁵ 172	164	169	165	
September	243	316	124	151	⁵ 171	⁵ 167	169	165	
October			124	150	172	167	170	166	280

Year and month	Index of prices received by farmers (August 1909-July 1911=100)								Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chickens and eggs	All groups	
1925	157	177	172	153	141	153	163	156	92
1926	131	122	138	143	147	152	150	145	86
1927	128	128	144	121	140	155	144	139	84
1928	130	152	176	159	151	158	153	149	89
1929	120	144	141	149	156	157	162	146	87
1930	100	102	162	140	134	137	129	126	79
1931	63	83	98	117	92	108	100	87	61
1932	44	47	82	102	63	83	82	65	52
1933	62	64	74	105	60	82	75	70	58
1934	93	99	100	103	68	95	89	90	70
1935	103	101	91	125	117	108	117	108	83
1936	108	100	100	111	119	119	115	114	89
1937	126	95	122	123	132	124	111	121	90
1938	74	70	73	101	114	109	108	95	75
1939	72	73	77	105	110	104	94	92	74
1940	85	81	79	114	108	113	96	98	78
1941	96	113	92	144	144	131	122	122	92
1942	119	155	125	199	189	152	151	157	104
1942—August	115	151	126	256	200	151	156	163	107
September	119	156	129	191	195	160	166	163	107
October	117	158	134	226	200	165	173	169	110
1943—August	155	167	204	308	206	181	193	193	117
September	158	171	204	311	207	185	201	193	117
October	162	171	197	264	203	187	212	192	116

¹ Federal Reserve Board, adjusted for seasonal variation. Revised November 1943.

² Total income, adjusted for seasonal variation. Revised March 1943.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

ment. Assuming that 2,500,000 acres must be harvested by new combines, 6,000 new combines would be needed for wheat alone.

Soybean acreage in 1943 was more than double that of 1941, and the 1944 goal calls for a 19 percent increase. Much of the expansion in soybean acreage to date has been in new areas, which has increased the need for tillage and planting, and particularly harvesting, equipment. About 8,000 new combines of the smaller sizes would be needed for each million-acre increase.

After reaching the lowest point in over 40 years, corn acreage increased 4 percent from 1941 to 1942. And the 1944 goals call for a 4-percent increase over 1943, which would call for considerable new corn machinery. To mechanically harvest a 1,000,000-acre

increase, for example, would require 5,000 corn pickers apart from a much larger number of pickers required to compensate for loss of farm labor.

The expected acreage of peanuts picked and threshed in 1943 is more than twice the 1941 acreage and the 1944 acreage goal calls for a 23-percent further increase. The expanded peanut acreage already has materially increased the requirements for peanut equipment, especially tooth weeders, side delivery rakes, and peanut pickers.

Dry edible bean and potato goals for 1944, calling for a combined acreage increase of 11 percent, are examples of other crops requiring much new equipment.

ERLING HOLE,
RAYMOND S. WASHBURN,
War Food Administration.

UNITED STATES
DEPARTMENT OF AGRICULTURE
BUREAU OF AGRICULTURAL ECONOMICS
WASHINGTON, D. C.

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FARM PROGRAMS FOR 1944 THE AGRICULTURAL • SITUATION •

DECEMBER 1943

A Brief Summary of Economic Conditions

Issued Monthly by the Bureau of Agricultural Economics, United States Department of Agriculture

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DESPITE TRYING CONDITIONS American farmers set a new food production record in 1943. They beat the banner year 1942. They produced nearly a third more than they were doing when war broke out in Europe in 1939. This is a real achievement. * * *

But the maws of war are cavernous and we must continue to meet its increasing demands. This is why the 380,000,000 acre goal for 1944, the largest on record, is five percent more than this year. * * *

All agencies of War Food Administration and the Department of Agriculture are geared to the one job of helping farmers next year exceed the 1943 record. More farmers will be advised of better operating practices through local demonstrations and similar educational means. Practice payments will also encourage better management. Price supports will be continued, when authorized, to assure a fair return for farm products. Credit will be available to help expand production. Electric power will be brought to more farms to help speed many operations. Every effort will be expended to bring seasonal and full-time labor to farms where needed. New scientific discoveries will help farmers increase production in 1944.

Commodity Reviews

DAIRY PRODUCTS

PRELIMINARY estimates now place total milk production for 1943 at 118.2 billion pounds as compared to 119.2 billion pounds for 1942. The 8 billion pound output in November continued the downward trend relative to 1942 which began last August. Production this November was 2 percent below November a year ago so that, on the basis of normal seasonal variation, this rate of production would bring the year's output to only 114 billion pounds.

Production Decline Less

The seasonal rate of decline in November, however, was less than normal, a reflection of the feed payments farmers began to receive in November. By December the payment plan seemed to have checked further declines in production and may even result in some increase in December output.

Lower milk production is having an effect on manufactured dairy products. Since the week ending September 30, weekly creamery butter production and weekly American cheese production estimates have both tended to lower levels relative to the corresponding weeks of 1942.

The whole-milk equivalent of the principal manufactured dairy products in October was 3,436 million pounds, showing a seasonal decline of 15 percent from September. Within this total, however, butter, evaporated milk, and American cheese production declined more than seasonally. Other cheese varieties were produced in larger amounts in October than in September.

The acute shortages of butter which were felt in civilian markets up to early October were alleviated by the termination of the butter set-aside requirements, and by the raising of the ration value from 12 to 16 points.

Total creamery butter production in October was 107.6 million pounds,

as compared with 124.0 million pounds for the same month a year ago.

American cheese supplies for civilian use continued short during October. The set-aside requirement was lowered from 50 to 25 percent during November and December, but with the seasonal decline in production the quantities remaining for civilians will be only slightly greater than in recent months.

Output of other cheese varieties has been heavier this year than last. Swiss and brick cheeses particularly are making up for some of the shortage of American cheese. Diversion of milk to these other cheeses, however, reduces the quantity of other dairy products for civilian use after military and lend-lease requirements are met. Ration point values on these cheeses were raised from 5 and 6 points to 8 points for December.

American cheese production in October was 55 million pounds, down 4 percent from October 1942, while other cheese production of 18.6 million pounds was 28 percent higher than a year ago.

Production of evaporated milk in October was 188.9 million pounds, 7 percent lower than October 1942. Withdrawals by war agencies and civilians resulted in reductions both in manufacturers' and in Government stocks during the month. Holdings of evaporated milk by manufacturers on November 1 were 265 million pounds, and by the Government 272 million pounds, as compared with 98 and 833 million pounds, respectively, a year ago.

Total production of condensed milk products, both whole milk and skimmed, in September was below a year ago, but two items in the group, whole milk case goods and unsweetened skim, were higher.

LIVESTOCK

EXCEPT for milk cows—with a proposed 2 percent increase—1944

livestock goals call for some reduction in animals on farms from the high point reached at the end of 1943. More milk cows will be kept on farms; fewer meat animals will be carried into 1945. But because milk comes from live animals and meat from butchered animals, the net result of goals achievement should be more milk and more meat for the coming year.

Feed more than ever will be a controlling factor. But by digging deeper into carry-over supplies, there probably will be about as much feed per animal in 1944 as fed before the war, though not quite as much as was consumed in 1943. Much will depend on efficient distribution and feeding.

The recent tendency of price supports and ceilings—including WFA payments to offset high feed costs—has been to provide a larger share of the feed for dairy cows. This means feed for meat animals is costing more, particularly outside the Corn Belt.

More animals, particularly sheep and lambs, calves and hogs, have been going to slaughter this fall than usual. Net result: a greater than seasonal increase in meat production.

Slaughterhouses Taxed

Slaughterhouses have been taxed to capacity, particularly with hogs, during the fall months. Estimates indicate that inspected slaughter this season should average about 1.1 million head of hogs a week at 27 leading centers in order to take care of all the marketable hogs on farms. Actual slaughter at these centers ran a little ahead of this figure during each of two weeks checked in November, yet hogs accumulated in slaughter yards faster than processed.

To help in handling the slaughter and distribution of the 1943 record hog supply, WFA eased restrictions on slaughterhouse quotas and on home sale and slaughter. Farmers are now allowed to sell and deliver pork and lard without permit or license, providing ration points are collected from purchasers.

What disposition is being made of the seasonal increase of meat production? First, civilians are to get more through increased allocations and reductions in ration point values—December rations are up 30 percent. Second, the military and lend-lease are expected to get a considerable share. Third, some of the increase may be stock piled to help assure requirements during months of lighter output.

POULTRY AND EGGS

A RECORD QUANTITY of chicken has been available for civilian consumption this holiday season. Supplies of turkey, on the other hand, have been moderately smaller than a year earlier because the slaughter has been a little less than last fall and because increased quantities have gone to the military forces. For 1943 as a whole, the per capita consumption of chicken and turkey will total nearly 33 pounds compared with less than 26 pounds in 1942.

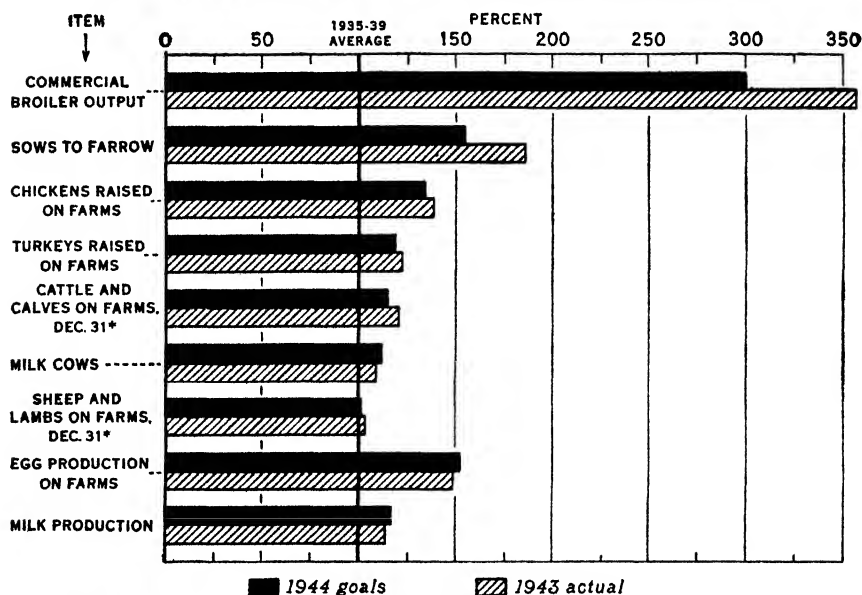
The expected 4,516 million dozen expected egg production for 1943 is 12 percent more than last year's record 4,018 million dozen output and 39 percent above the 1937-41 average.

Marketings of both chickens and turkeys this year were seasonally heavy in the last quarter. And even at the record high supply levels the unprecedented consumer demand for poultry at ceiling prices probably has not been fully satisfied.

Demand for baby chicks began to slacken somewhat in late October, apparently reflecting continued tight feed supplies, but is relatively strong for this season of the year.

The rate of production per layer during October was lower than a year earlier in the North Atlantic States and in the Western States but this was almost entirely offset by a higher average rate in the West North Central States. With more layers on farms, prospective supplies of eggs for civilians in the last 3 months of 1943 are slightly larger than a year

WARTIME INCREASES IN UNITED STATES LIVESTOCK NUMBERS 1944 GOALS AND 1943 ACTUAL AS PERCENTAGE OF 1935-39 AVERAGE



*SMALLER NUMBERS ON FARMS AT END OF NEXT YEAR REFLECT LARGER SLAUGHTER IN 1944 THAN IN 1943

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earlier and the largest on record for the period. The decline in consumption from the spring peak to the fall low was unusually small during 1943.

Ceiling prices for shell eggs have started to decline as actual prices usually do this time of year. But demand for top grade eggs has exceeded supplies at ceiling prices by an increasing margin in recent weeks, which reflect record purchasing power and apparent quality preference. Prices of lower grades have strengthened. Supplies of most eggs of such grades have been sufficient to meet demand at ceiling levels.

FRUIT

ORANGES, grapefruit, lemons, apples, and pears constitute the principal fresh fruits moving to market in substantial volume during the winter season. In addition, grapes move in moderate volume at this time.

The 1943-44 orange and tangerine

crop is expected to be 8 percent larger than the crop of the past season, but the grapefruit crop is expected to be 3 percent smaller. Production of oranges and tangerines this season, exclusive of California Valencia oranges, which will be harvested principally next summer, is estimated at 65 million boxes.

Production of grapefruit, exclusive of California harvest next summer, is estimated at 47 million boxes. Lemon output in California is estimated at 14 million boxes, or 4 percent smaller than last season.

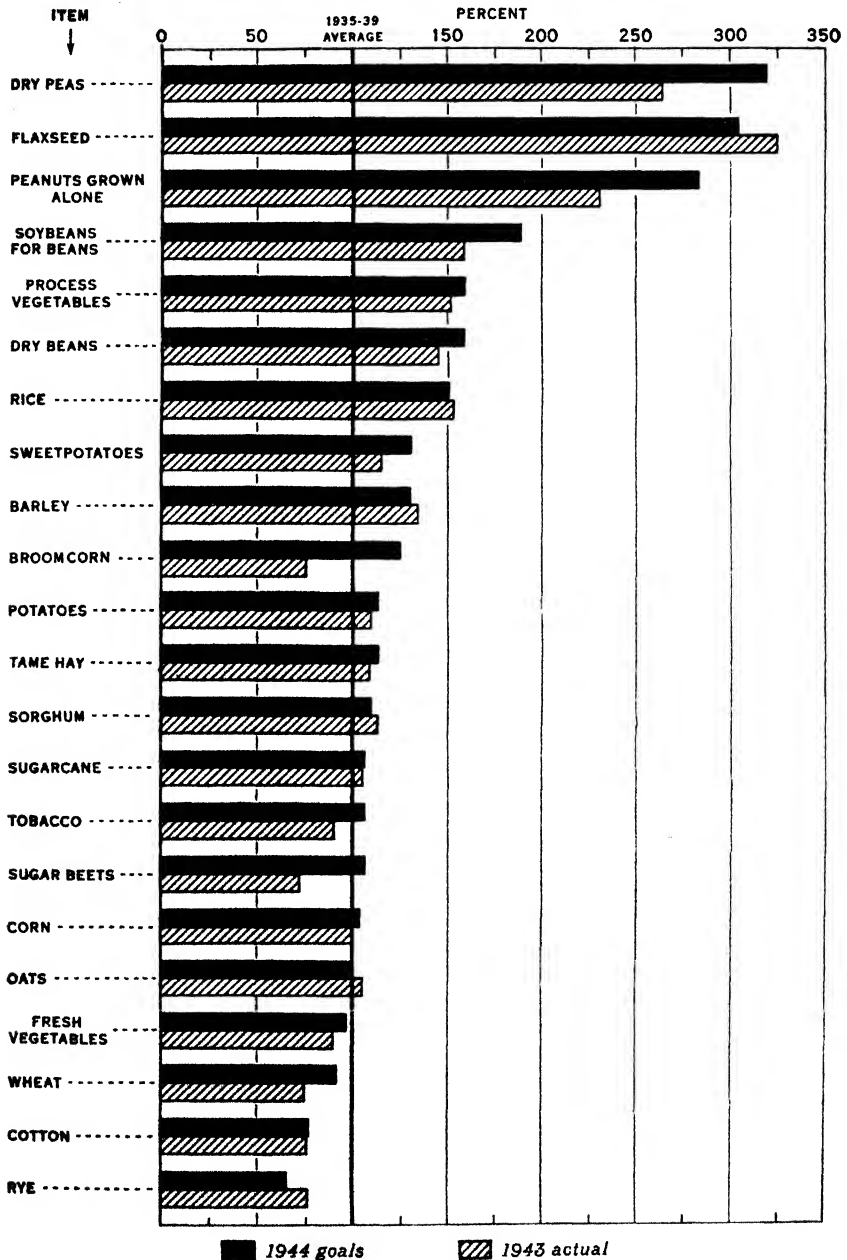
Commercial apple crop, estimated at 88 million bushels, is 31 percent smaller than the near-average crop last year. Fresh pears during the winter season will come mainly from non-Bartlett varieties produced in the three Pacific Coast States, where the production is estimated at 4 million boxes, 20 percent below a year ago.

The record large grape crop, estimated at 2,790,000 tons, is 16 percent larger than last year. Production of

the four major tree nuts—walnuts, almonds, filberts, and pecans—is 10 percent larger than a year ago.

Ceiling prices are now in effect for most of the principal fresh fruits and tree nuts moving to market. Recent

WARTIME INCREASES IN UNITED STATES CROP ACREAGE 1944 GOALS AND 1943 ACTUAL AS PERCENTAGE OF 1935-39 AVERAGE



Index Numbers of Prices Received and Paid by Farmers

[1910-14=100]

Year and month	Prices received	Prices paid, interest, and taxes	Buying power of farm products ¹
1942			
January.....	149	145	103
February.....	145	147	99
March.....	146	150	97
April.....	150	150	100
May.....	152	151	101
June.....	151	151	100
July.....	154	152	101
August.....	163	152	107
September.....	163	153	107
October.....	169	154	110
November.....	169	155	109
December.....	178	156	114
1943			
January.....	182	157	116
February.....	178	159	112
March.....	182	160	114
April.....	185	162	114
May.....	187	163	115
June.....	190	164	116
July.....	188	165	114
August.....	193	165	117
September.....	193	165	117
October.....	192	166	116
November.....	192	167	115

¹ Ratio of prices received to prices paid, interest, and taxes.

apple prices have been at ceiling levels, but Florida orange prices, reflecting heavy marketings, are below.

FEED

PRESENT indications point to a total feed grain output this year of nearly 116 million tons, only 8 million tons under last year's record.

Although dry weather during October and early November aided the harvesting of late crops it was unfavorable for pasture growth. On November 1 pasture condition was 70 percent of normal, 13 points below the condition a year earlier but 5 points above the 1932-41 average for that date. Hay production for 1943 is 97 million tons, 8 million less than last year's near-record output, but 13 million tons more than the 10-year (1932-41) average.

For the year ended September 30, approximately 14 million tons of

wheat and rye were fed compared with 6 million tons in 1941-42 and an average of 4 million tons in the 5 years 1935-39. Disappearance of corn, oats, barley and grain sorghums for all purposes also was at a high level in the period October-September, 1942-43, totaling about 127 million tons compared with 109 million tons a year earlier and the 5-year average of 85 million tons.

VEGETABLES

FRESH MARKET supplies of truck crops during December and early January are expected to be somewhat larger this season than last. Lettuce, carrot, and celery supplies are now expected to be substantially above those of a year ago. Storage stocks of onions and cabbage, however, are smaller than a year ago. Such stocks must provide the bulk of onion marketings until about mid-April, most of the cabbage marketings in December, and part of the cabbage marketings in January and early February.

Estimates as of December 1 for "winter" and "spring" plantings or intended plantings of 15 commercial truck crops for fresh market shipment indicate a total of 462,420 acres, 17 percent above the corresponding acreage last year and 34 percent above the 10-year (1933-42) average.

The aggregate 1943 production of truck crops for processing is estimated to be about 10 percent smaller than last year but about one and a half times larger than the 10-year average. Largest decreases below last year are in tomatoes, green lima beans, cabbage for kraut, and cucumbers for pickles.

Civilian supplies per capita of processed vegetables for the 1943-44 season as a whole may be only about three-fourths to four-fifths as large as the quantity consumed in 1942-43.

A record large crop of white potatoes was harvested this year—approximately 469 million bushels, 26 percent larger than a year ago and 29 percent larger than the average for 1932-41.

The per capita civilian supply for this season is indicated to be about 16 percent larger than for the past season. Total supplies for the remainder of the season should be adequate for all purposes, despite heavy demands.

WHEAT

RECORD SUPPLIES of wheat in the United States for both the past marketing year and current year, beginning July 1, 1943, have made large quantities available for feed and industrial alcohol production. The war-stimulated increases in animal numbers to unprecedented heights has been made possible through the feeding of wheat in addition to very large quantities of corn and other feed grains. Alcohol produced from wheat is used in the production of synthetic rubber, smokeless powder, shatter-

proof glass and many other products essential to the war effort.

Because there has been only a moderate increase in the use of wheat for food, these two nonfood uses have been largely responsible for the reduction in the carry-over of wheat from a record of 632 million bushels in 1942 to 618 million bushels in 1943 and, on the basis of present estimates, to about 300 million bushels next July.

A 300 million-bushel carry-over would more than provide for operating stocks liberally placed at 150 million bushels, 75 million bushels as a reserve against small crop yields, and 50 million bushels as a reserve for relief to war-stricken countries. But next July's carry-over would be strikingly above the 40 million carry-over in 1918 and 83 million in 1937.

The wheat supply for the year beginning last July 1 is estimated as fol-

Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets, based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State]

	5-year average		November 1942	October 1943	November 1943	Parity price November 1943
	August 1909-July 1914	January 1935-December 1939				
Wheat (bushel).....	dollars.. 0.884	0.837	1.044	1.35	1.37	1.48
Corn (bushel).....	do... .642	.691	.759	1.07	1.05	1.07
Oats (bushel).....	do... .399	.340	.443	.744	.752	.666
Rice (bushel).....	do... .813	.742	¹ 1.541	1.70	1.83	1.36
Cotton (pound).....	cents.. 12.4	10.29	19.22	20.28	19.40	20.71
Potatoes (bushel).....	dollars.. .697	.717	1.084	1.28	1.33	1.20
Hay (ton).....	do... 11.87	8.87	9.84	13.70	14.50	19.40
Soybeans (bushel).....	do... .96	.954	1.58	1.80	1.80	¹ 1.60
Peanuts (pound).....	cents.. 4.8	3.55	5.94	7.05	7.12	8.02
Apples (bushel).....	dollars.. .96	.90	¹ 1.21	2.08	2.24	1.60
Oranges, on tree, per box.....	do... 1.81	1.11	1.89	2.61	2.24	¹ 1.94
Hogs (hundredweight).....	do... 7.27	8.38	¹ 13.43	14.00	12.90	12.10
Beef cattle (hundredweight).....	do... 5.42	6.56	¹ 11.12	11.80	11.30	9.05
Veal calves (hundredweight).....	do... 6.75	7.80	¹ 12.82	13.20	12.70	11.30
Lambs (hundredweight).....	do... 5.88	7.79	¹ 12.04	12.20	11.90	9.82
Butterfat (pound) ¹	cents.. 26.3	29.1	¹ 47.9	50.7	50.9	¹ 46.6
Milk, wholesale (100 pound) ¹	dollars.. 1.60	1.81	¹ 3.01	¹ 3.30	¹ 3.37	¹ 2.94
Chickens (pound).....	cents.. 11.4	14.9	19.6	24.6	24.3	19.0
Eggs (dozen).....	do... 21.5	21.7	38.9	45.2	47.1	¹ 49.5
Wool (pound).....	do... 18.3	23.8	¹ 40.0	40.7	40.7	30.6
Tobacco:						
Flue-cured, type 11-14.....	cents.. ¹ 22.9	-----	40.0	41.7	44.5	31.4
Maryland, type 32.....	do... ¹ 22.9	17.6	28.5	59.0	64.0	24.5

¹Revised.

²Comparable base price, August 1909-July 1914.

³Comparable price computed under Section 3 (b) Price Control Act.

⁴Comparable base price, August 1919-July 1929.

⁵Does not include dairy feed payments since October 1943.

⁶Adjusted for seasonality.

⁷Preliminary.

⁸5-season average, 1934-38.

⁹Base price, crop years 1919-28.

lows (in million bushels): Carry-over of 618, crop 836, making a total supply of domestic wheat of 1,454. Disappearance is estimated as follows (also in million bushels): Food 535, feed 380, seed 80, industrial alcohol 110, and exports, including flour in terms of wheat, 50.

Imports of wheat by the Commodity Credit Corporation from July 1 to early November totaled about 40 million bushels, all of which is for feed, and this is in addition to domestic wheat being fed. The total amount of wheat to be imported this season is tentatively placed at 100 million bushels, the actual quantity may be more or less depending upon shipping arrangements.

The wheat estimated for feed in 1943-44 consists of 120 million bushels on farms where grown, 350 million sold by the Commodity Credit Corporation, of which 250 million is domestic and 100 imported, and 10 million purchased in the open market. Open

market purchases for feeding will depend to a large extent on the availability of imported grain for feeding.

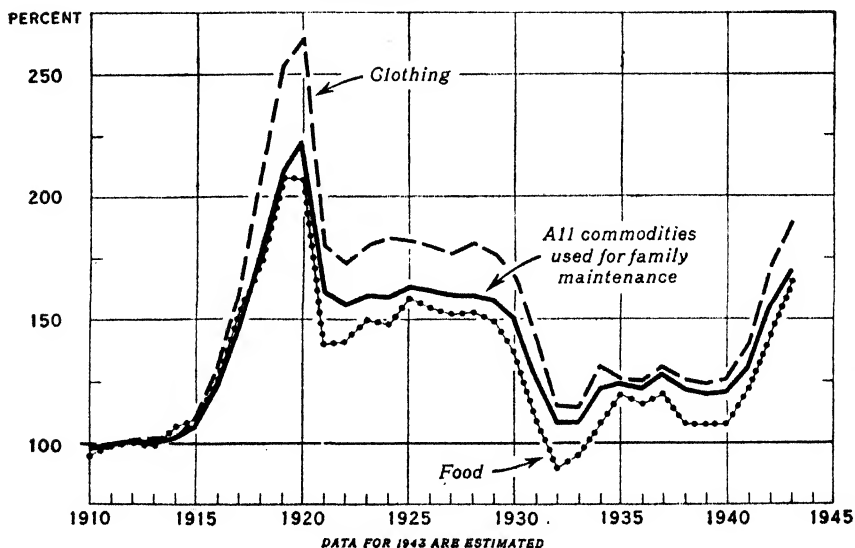
Wheat prices have advanced since early October to the highest levels in 15 years, reflecting continued distillery demand in addition to that of millers, continuation of dry conditions in the area extending from southwestern Nebraska to western Texas, and the authorization of a flour subsidy.

On November 19 the Stabilization Director announced a flour subsidy to enable wheat flour millers to pay as high as parity prices for wheat and at the same time to sell flour for no more than ceiling prices now in effect. With the recent advance in wheat prices, flour millers have had to pay considerably more than the wheat price equivalent of the flour ceilings.

On November 6 price ceilings were placed on soft wheat and it is anticipated that as the price of other wheats reach parity further ceilings will be announced.

PRICES PAID BY FARMERS FOR FOOD, CLOTHING, AND FAMILY MAINTENANCE, UNITED STATES, 1910-43

INDEX NUMBERS (1910-14=100)



ACHIEVING 1944 FARM PRODUCTION

ALTHOUGH 1943 seemed to offer the maximum challenge to the genius of American agriculture, the goals for 1944 are still higher.

These goals, established after consultation with farm groups in every state, carefully took into account the factors of farm labor, farm machinery and supplies, farm prices, feed and livestock balance, and available acreage, as well as the know-how of the farmer himself.

But the farmer cannot do the job alone. Nor can food be produced by directives. Obstacles must be removed and help furnished.

The War Food Administration will continue to assist in meeting the farm labor problem. It will continue to insist on adequate allotments of steel and other critical material for the production of machinery and repair parts. It will continue its efforts to provide support prices that will last through the production, harvesting and marketing season. These should be sufficient to cover not only normal costs but also the added risks and hazards that are linked with increased production. A way should be found to secure these prices without breaking the stabilization line.

Given an even break in the weather, in spite of the many wartime difficulties that exist, the high 1944 goals will be reached.

MARVIN JONES
War Food Administrator

Administering 1944 Programs Locally

UNPRECEDENTED demands of war promise to make 1944 the busiest and most critical year that the 100,000 State, county, and community committeemen who form the backbone of the Agricultural Adjustment Agency have ever known. With the need so great that more food must be produced than in any of the last seven record-breaking years, American farmers must operate their farms more effectively than ever before. To this end the AAA program will be a conservation program designed to increase and maintain production in 1944 and 1945 so that war needs will be met.

The AAA committeemen will administer this program in the field. They will perform a multitude of special tasks assigned by the War Food Administrator. Many of them will

give much time and energy to the work of the State and county USDA War Boards.

In administering the AAA program itself, the committeemen's main job will be to help their fellow-farmers carry out production-increasing practices. Representative of these practices are application of lime and phosphate, contour farming, harvesting of winter legume and grass seeds, use of protected summer fallow in areas of limited rainfall, range and pasture improvement measures, and use of winter cover crops, especially legumes. All of these practices produce immediate results. Indeed, no practice was included in the 1944 National list until it had passed these two tests: (1) Will it increase food production in 1944 and 1945, and (2)

Can it be administered with a minimum of red tape?

Approved practices, and also the rate of payment for each, will vary widely from State to State according to topography, soil, climate, State conservation needs, and the extent each practice contributes to wartime production under State conditions. State and Federal agencies will cooperate in selecting from the National list those practices which will be approved in each State, and the rates of payment which will apply.

County committeemen will select from their State lists those practices which require special emphasis in their respective counties. In some cases assistance will take the form of payments made directly to cooperating farmers; in others it will take the form of materials.

In areas producing flue-cured or Burley tobacco, committeemen will administer the allotment and quota program as in former years.

Besides strictly AAA work, State and county committeemen will be called upon during 1944 to perform a number of special duties assigned to the AAA by the War Food Administrator. These duties include:

- Production goal work, including livestock, poultry, and dairy goals. This is a continuation, with wartime emphasis, of the assistance AAA committeemen gave farmers in planning their farm production in former years. They will help farmers determine their farm goals and plan their 1944 operations with a view to contributing as much as possible toward

meeting war food needs. Committeemen will be responsible for endeavoring to step up production in areas where the threat arises that goals will not be met.

- Facilitation of transportation and distribution of feedstuffs.

- Certification of canners for vegetable crops, under direction of CCC.

- Administration in the field of rationing and allocation of farm machinery and equipment (including copper wire), building supplies, fertilizers, and other agricultural materials and facilities, under direction of the Office of Materials and Facilities.

- Issuance of farm slaughter permits, under direction of the Food Distribution Administration.

- Administration in the field of the farm transportation program, including issuance of certificates for tires, off-highway gasoline, and tractor fuels, under direction of OMF.

- Certification of applications for frozen food locker plants, under direction of OMF.

- Administration of the alcohol order, under direction of OMF.

Each State and county AAA chairman, or, in the South, each State AAA executive officer, is, ex officio, chairman of his State or county War Board. War Board membership includes representatives of all USDA and WFA agencies having offices in a State or county. As now constituted, War Board functions are mainly consultative.

N. E. DODD, *Chief*
Agricultural Adjustment Agency

Price Supports to Boost Production

THE COMMODITY Credit Corporation is now financing loans, purchases, and sales of agricultural commodities at the rate of 3.5 billion dollars a year. Loans are being made at 85 to 90 percent of parity on basic and proclamation crops, and purchases at levels designed to

reflect to farmers the price supports stipulated by the War Food Administration in connection with the 1943 farm production program. This program called for larger agricultural production than in 1942.

Goals for 1944 have been raised still higher but price support com-

mitments have not as yet been announced pending the decision of Congress with regard to payments by the Government for the purpose of "holding the line" on the cost of living. Farmers have indicated meanwhile that in setting the goals for 1944 they would need adequate machinery, fertilizer, and labor and that it would be necessary to have a continuation of the present price supports, and in some cases increased price supports.

Prior to our entering World War II, the Corporation was engaged principally in lending money to farmers on commodities produced in excess of current physical needs. From 1933 through 1941 these loans totaled approximately 2 billion dollars. Under war conditions during the last two years, loans have totaled nearly as much as during the preceding nine years. In addition, the Corporation has financed the purchase and sale of approximately 3 billion dollars of agricultural commodities for Lend-Lease account, and the purchase and sale of commodities valued at approximately 1 billion dollars in conjunction with the programs designed to stimulate wartime production of food, feed, and fibers.

Loans Increasing

During the past fiscal year the Corporation lent farmers 806 million dollars as compared with 626 million dollars in 1942, and with 452 million dollars in 1941. Total loans were larger than in 1942 principally because of the larger quantities of wheat and cotton put under loan and because of an increase in loan rates. Loans on corn were smaller than in 1942 since market prices were higher than loan values. Other commodities on which CCC made loans during the last fiscal year include barley, fiber flax, flaxseed, grain sorghums, linseed oil, olive oil, rosin, soybeans, and turpentine. Loans outstanding on September 30, 1943, totaled 445 million dollars as compared with 475 million dollars a year

earlier. The total for September 30 this year includes loans to that date on 1943 crops of barley, cotton, flaxseed, rye, and wheat. Loans on 1943 crop corn began on December 1.

Present CCC programs include assistance to farmers in meeting increased costs of production by means of payments to processors or dealers to enable them to increase prices to producers, payments to farmers direct to help offset increased production costs, and the sale of feed and fodder purchased or made available from accumulated granary stocks. This category includes payments through processors to stimulate the production of American Cheddar cheese, payments through dealers to maintain milk production in metropolitan areas, payments to dairy farmers direct to offset increased feed costs, and the sale of feed wheat and hay below costs.

CCC Stocks Reduced

The Corporation sold from its accumulated granary stocks approximately 450 million bushels of feed wheat below cost during the last 2 years, and it facilitated by means of area adjustment payments the movement of 32 million bushels of corn from surplus to deficit Eastern and Southern producing regions. Related activities include the purchase of 44.4 million bushels of feed wheat from Canada, 56,000 tons of feed wheat and 17,920 tons of barley from Argentina, 70,072 tons of cottonseed meal from Brazil, 2,453 tons of livermeal from Australia and New Zealand, and 11,466 tons of whale guano from Chile.

The Corporation has bought more than 200 million pounds of the 1943 domestic production of wool for sale at ceiling prices. It has bought 250 million pounds of 1943 crop tobacco for Lend-Lease account and sale to British civilians in conjunction with a program to maintain the foreign market for United States tobacco. It is paying part of the excess ocean war risk and freight costs on Caribbean sugar for the purpose of maintaining

present price ceilings on this commodity. Large quantities of foreign fats and oils have been purchased to supplement domestic production.

All foreign purchasing activities except the buying of Caribbean sugar and Canadian feed grains are being transferred to the Foreign Economic Administration, but arrangements are being made for the handling of foreign agricultural commodities by the CCC after they have been landed in the United States.

The largest wartime operations of the Corporation on individual domestic commodities are in connection with the purchase and sale of soybeans through processors, and of peanuts through cooperative peanut growers associations. The 1943 crop of peanuts (excepting the quantity needed as seed for planting in 1944) is being bought by the Corporation at \$130 to \$140 a ton. Part of the crop is being

sold to crushers at an average of \$90 a ton, and part to shellers at \$175 a ton. The prices received by farmers average higher than in 1942.

On September 30, 1943, the Corporation owned commodities having a book value of 890 million dollars as contrasted with 720 million dollars on the same date last year. These figures do not include accounts for Lend-Lease. The commodities owned by the Corporation on September 30, this year, included 162 million bushels of wheat, 233 million pounds of tobacco, 2.7 million bales of cotton, and smaller quantities of barley, rye and other commodities. A year earlier CCC owned 309 million bushels of wheat, 297 million pounds of tobacco, 3.5 million bales of cotton, and lesser quantities of other commodities.

J. B. HUTSON, *President*
Commodity Credit Corporation

Bringing 1944 Programs to Farmers

TO INCREASE 1944 agricultural production over the 1943 record achievement presents a serious challenge not only to every farmer and rancher but to every agency of government. This will mean the meeting of many new problems, frequently under changing conditions. And this is the job of the cooperative Extension Service—to apply the experiences and facilities of Federal, State and county supervisory and technical people to solve these new problems of production, management, marketing and rural home life. Of the many jobs 1944 has in prospect for the Extension Service, five are of major importance.

Increasing Efficiency

Producing the greater volume called for in the 1944 goals will require the utmost efficiency in production, marketing and distribution of agricultural commodities. The bulk of the increases in crop and livestock pro-

duction must come through more efficient operating practices on land now being farmed rather than through additional acreages not previously cropped.

For example, shortages of certain items may require the adoption of alternatives with which a farmer may have little or no experience. Or, a farmer may be producing a crop for the first time in this effort to meet acreage goals. In both cases the farmers will want to follow the best practices. It is in this field that the county agent or extension specialist can bring to bear the latest operating experiences or the results of national and State experimental work.

This means that county agents, home demonstration agents and other extension workers will have to make wider use of printed materials, meetings, demonstrations, tours and personal contact in order to reach more farm families. In addition, more

farmers will have to be trained to assist other operators in their neighborhoods.

Conserving Essential Equipment

Even with all the 1944 farm machinery made available, farmers will have still to conserve what they have, especially tractors, trucks, motors, combines and similar complex machinery. The care and repair of farm machinery will be encouraged by Extension workers through the cooperation of vocational agriculture departments, machinery dealers, and will be promoted through the establishment of training schools and community repair shops where possible. To replace the constantly decreasing number of experienced farm machine operators Extension workers will aid in the training of skilled workers to handle the equipment to yield the greatest service.

Neighborhood machinery exchanges, the building of home-made equipment, short cuts in production and marketing operations, and aiding farmers and ranchers reroute truck lines and pool farm trucking facilities are other conservation methods Extension will continue to emphasize in 1944.

Utilizing Farm Labor

The 1944 goals will require the fullest possible use of the present farm labor supply together with an additional 50 to 75 thousand full time workers and a third to a half million seasonal workers.

Extension workers will continue in every way possible to cooperate with WFA's Office of Labor in assisting farmers meet the critical 1944 farm labor supply problem. This will be done through such methods as encouraging the sharing of labor, training farmers in the most efficient use of labor, making wider use of labor saving devices, recruiting labor locally, assisting in both interstate and intrastate movement of labor, and holding training centers for full-time workers as well as for inexperienced women and youth for seasonal work.

Up to November 1 of this year county agents, in cooperation with county farm labor committees composed of farmers, had placed 3½ million seasonal workers and nearly 150 thousand full-time workers. Such efforts will continue in 1944.

Stimulating Victory Gardens

A total of 20 million Victory Gardens producing 8 million tons of food from 4 million acres briefly tells something of this year's home-produced food program.

Next year's goal is 22 million gardens. Emphasis on larger gardens and cropping late into the fall during the coming year should bring a considerable increase over the huge supply of home-produced food in 1943. In a very real sense this program will conserve a great deal of the Nation's transportation, processing, and marketing facilities by reducing the amount of food purchased.

As in the past, much of the guidance in the 1944 Victory Garden program will come from Extension workers. To county agents and home demonstration agents this will mean hundreds of thousands of office calls and other contacts with urban and rural people.

Home demonstration agents will play a chief role in helping many more housewives use the best methods for preserving the foods from their own gardens.

Encouraging Rural Youth

The 4-H Club program, with 1,700,000 farm boys and girls now working on various projects, will take on added significance in 1944 because farm youth is playing an increasingly important role in the war food picture. Many more farm boys and girls are taking the place of older members of the family or hired workers who have gone to the battlefronts or war industries.

One of the chief responsibilities of 4-H Club members will be in training and supervising other young people, generally inexperienced, who come as Victory Farm Volunteers to help with various farm operations. And mem-

bers will continue to produce food, fight rural fires, collect scrap, promote farm safety, sell bonds, encourage health improvement, and do many other war jobs.

These future citizens of America deserve the best. We must give them the best training available.

M. L. WILSON, *Director*
Federal Extension Service

Increased Output Through Credit Aids

CREDIT INSTITUTIONS under supervision of Farm Credit Administration provide financing for only a portion of the total number of farmers. The existence of these institutions, however, is further assurance that farmers will have access to adequate credit at reasonable cost. Such assurance is particularly important at a time when agriculture is geared to fulfill wartime needs.

The actual amount of short-time credit used by farmers has been increasing during the war period. Of the total of \$587,869,000 of short-term credit advanced by Farm Credit institutions during the year ending October 31, 1943, \$497,489,832 came from 525 Production Credit Associations. This was 4.6 percent more money than was borrowed from these local cooperatives in the previous 12-month period and 55.9 percent more than in the year 1939.

Loans Repaid Rapidly

Farmers are paying off their loans more rapidly during the present war period and some farmers are accumulating enough money to finance themselves. On the other hand, these factors are offset by the increased need for credit to finance shifts in types of production and increases in operating costs. This tendency will probably continue during 1944.

Other sources of short-term credit in 1943 were Emergency Crop and Feed loans as well as loans and advances from the Regional Agricultural Credit Corporation of Washington, D. C. A total of 115,483 farmers used \$18,671,372 of credit from the Emergency Crop and Feed Loan Offices in the year ending October 31, 1943.

The Regional Agricultural Credit Corporation advanced \$64,000,000 to finance the production of especially needed war crops in this period. The program was outstandingly successful in increasing the production of such crops as flax and soybeans. This source of credit will be held as a standby in 1944 to be used for specified crops in areas named by the Secretary of Agriculture as provided in Section 2 of the 1943 Agricultural Appropriations Act.

The Banks for Cooperatives extended credit totaling \$347,332,520 in the period ending October 31, 1943. This represents an increase of 50.5 percent over the previous 12-month period and 416.7 percent over 1939. Most of this credit extended by the Banks for Cooperatives is used by cooperative associations to finance the handling of war essential services in the purchase of supplies, and processing and marketing of farm products. The expanded volume, higher costs and shifts in products handled because of war needs have all been contributing causes of the increased use of credit by cooperatives. The Cooperative Research and Service Division will continue to help cooperatives provide maximum service in carrying out wartime agricultural programs.

The Federal Intermediate Credit Banks continue to obtain at reasonable costs increasingly large amounts of funds from private investors to supply the loan funds needed by PCAs and Banks for Cooperatives.

In the field of long-term credit, the Federal Land Banks and the Federal Farm Mortgage Corporation find that during the war period a larger proportion of their loans are being used to finance the purchase of farms than in

peacetime years. This would indicate that the credit supplied by these institutions is a definite aid to keeping farms in the hands of people actually using the farms to produce needed wartime goods.

The Farm Credit Administration is keenly aware of its responsibility of pointing out to farmers how they can guard against the ill effects of in-

flation and a land boom. In 1944 it will continue to urge farmers to avoid speculation, to reduce debts to reasonable levels, and to build up reserves both through the purchase of War Bonds and through future payment funds with the land banks.

A. G. BLACK, *Governor
Farm Credit Administration*

Electric Power to Speed Production

TWO TASKS face the Rural Electrification Administration as its primary part in enabling American farmers to produce the quantities of food and fiber required of them in what will doubtless be both the most strenuous and the most critical year of their history. One of the tasks is to get electricity to as many as possible of those farms now without it to be used to increase production. The other is to see that the 40 percent of American farms which already have electric service make maximum productive use of it.

Working Electricity

The fact that electricity fully applied may make a very large contribution to food production is attested from all sorts of farm sources. I like to think of this full use in the words of an Iowa woman who, describing recent production of the farm which she and her husband operate, told how they had stepped up the use of a great many of their mechanical aids. "Then we stopped to look around," she said, "and found everything was working to full capacity except our electricity. So we put overalls on that."

Kilowatts in overalls! This is the way two million American farm families are coming to look at their electric service. They find it speeds operations, saves time, and to some extent replaces sons gone to war, daughters and hired men gone into other important war work.

The first of the two tasks is the simpler because its scope is strictly limited. Copper, steel, construction trucks, labor for wiring crews—all are urgently needed on other sectors of the battlefield, and the quantities which may be used to extend electric lines to unserved farms are very carefully parceled out by the War Production Board. Nearly a year ago, the War Production Board recognized the fact that the relatively small quantities of these critical materials required could be diverted to farm service extensions with prospects of immediate substantial dividends to the nation in the form of additional food production. In January, WPB delegated to County USDA War Boards authority to approve connections of farms to existing power lines under certain conditions of production potential. Requirements have since been made less stringent. More recently, authority to approve has been transferred to AAA field representatives acting under direction of the Office of Materials and Facilities.

80,000 More Farms

REA-financed rural electrification cooperatives have indicated that, even if the regulations are not further liberalized, REA may count on connecting 80,000 additional farms in 1944, about the same number connected in 1943.

To the second of the enumerated tasks, no limit has yet been found. With all the myriad ways, long known,

in which electricity may be harnessed to food production, newer and even more effective ones are constantly being found. At a time when it is difficult if not impossible to get new appliances and electrically operated equipment, these new uses are achieved mainly with home-devised, home-built appliances and equipment.

Scores of these devices are coming into wider and wider use. The most spectacular among them—in results, not in design—is the electric pig brooder. By its use a farmer may, other conditions being equal, produce

the same number of pigs with from 10 to 30 percent fewer sows to carry over and feed.

To search out all of the ingenious ways in which individual farmers are making electricity work harder and more efficiently, then to take this knowledge to all the others who are in position to use it, and to put them in the way of using it to increase the nation's food supply—that is the unlimited part of REA's work in the food production campaign of 1944.

HARRY SLATTERY, *Administrator*
Rural Electrification Administration

Greater Output from Small Farms

STUDIES made by Farm Security Administration and Bureau of Agricultural Economics have shown that there are between 500,000 and 750,000 low-income farm families who could make substantial increases in food production with FSA assistance. This fiscal year, as in 1942 and 1943, it will be the aim of Farm Security to assist as many as possible of these families, provided they are eligible under its lending policies, with the help they need to expand their output of war foods.

Thus far Congress has made available this year a total of \$60,000,000 for rural rehabilitation loans and \$30,000,000 for tenant purchases loans. This will enable FSA to make about 15,000 original and 175,000 supplemental operating loans as well as 5,000 tenant purchase loans. A supplemental request, pending in Congress as of December 15, will provide an additional \$44,000,000 for loans and administrative purposes—it will make possible 50,000 more new loans.

Borrowers Double Production

In 1942, the 463,941 actively supervised rural rehabilitation and tenant purchase borrowers made increases ranging from 20 to 101 percent over their 1941 production of nine war-essential products. Prospects are

that the average actively supervised borrower on the program in 1944 will make further substantial increases. It is estimated that the 65,000 new borrowers will increase 1944 food production over 1943 as follows: milk, 158,750,000 pounds; pork, 27,875,000 pounds; beef, 18,500,000 pounds; eggs, 9,125,000 dozen; chickens, 4,750,000 pounds; soybeans, 562,500 bushels; peanuts, 21,250,000 pounds; dry beans; 6,000,000 pounds.

Loans Supervised

Rural rehabilitation loans are made to small farmers who cannot get from any other source credit on reasonable terms to expand production. The loans usually run for 5 years at 5 percent interest and are accompanied by practical guidance from FSA county supervisors in efficient farm and home management. Tenant purchase loans are made each year, under provisions of the Bankhead-Jones Farm Tenant Act, to a limited number of worthy eligible farm tenants, sharecroppers, and farm laborers to buy farms of their own. These loans may run for 40 years at 3 percent interest and also are accompanied by guidance in up-to-date farming methods.

This fiscal year FSA is vigorously continuing its policy of encouraging all borrowers to use their higher in-

comes to step up loan repayments and liquidate their debts. In 1942-43, repayments on rehabilitation loans jumped to \$114,765,976, about 40 percent more than principal repayments of \$81,403,546 in 1941-42, the previous record year. Repayments on tenant purchase loans are also expected to be heavy.

In 1944, the Farm Security Administration will continue other services essential to efficient operations on small farms. Loans will be made to farmers for the joint purchase and use of machinery, purebred sires and other farm and home equipment

As in the past, mutually beneficial tenure arrangements between tenant farmers and their landlords will be encouraged, including written leases providing for the production of needed food and fiber crops. If a plan for equitable payment of old debts is necessary to continued operation of a farm, the farmer and his creditors will be helped to reach a voluntary agreement of adjustment.

Because the good health of the rural population is necessary to the success of the war food production program

FSA will continue to assist its borrowers to organize group medical care plans so that they can get needed doctor and hospital care.

This fiscal year a total of \$1,000,000 has been appropriated for loans and technical services for the development of farm and home water supplies in dry-land areas of 17 Western States.

To increase the efficiency of FSA operations at the county level, single Farm Security committees of three members have been organized to take the place of three separate committees and a county advisory council. We intend that new blood shall periodically be brought into these communities under our procedure providing for naming one new member each year. These committees will determine the eligibility of all applicants for loans and generally assist in all phases of the FSA program. One of their most important activities will be to help integrate the FSA food production efforts among low-income farmers more completely into the county and community war food production programs.

FRANK W. HANCOCK, *Administrator*
Farm Security Administration

1943 Research Available for 1944

ALARGE volume of research bearing on war problems is conducted by the seven bureaus of the Agricultural Research Administration. Here are just a few of the results reported during the past year which are likely to affect next year's agricultural production and other war activities.

Better Crop Yields

Seed of the new wilt-resistant alfalfa, Ranger, is being increased, and a new wilt-resistant variety, Buffalo, has been introduced. * * * Crop rotations have been determined that promise to prevent severe losses of staple crops caused by white-fringed beetles. * * * Successful commercial-scale tests have been completed which show that a derris spray can

be used to control European corn borer in early sweet corn, with an excellent return to the grower. * * * Soil surveys have been used successfully to guide the expansion of war crops to soils of suitable types, thereby helping to assure production. * * * A new method of spraying is being developed to remove excessive blossoms on apple trees and save the labor of thinning the apples by hand.

New Feed Sources

Methods have been developed for successfully utilizing increased amounts of home-grown legume hays as partial substitutes for grain concentrates and protein feeds in swine rations. * * * Detailed formulas

for wartime feed mixtures for poultry will help producers to maintain maximum production by the use of available feed stuffs as substitutes for those that are scarce. * * * Silage, proved by feeding tests to be equal to good corn silage, has been made by combining molasses with sweetpotato vines. * * * In Hawaii, a method has been developed for preparing a valuable dehydrated livestock feed from kitchen waste in considerable quantity. * * * Experiments have shown that early-cut cereal hays can be used as high protein feeds.

Greater Milk Output

Standards have been determined for gaging the potential producing capacity of cows by measuring the mammary gland development of calves at 3 to 5 months of age. * * * It has been demonstrated that if cows are fed all the legume hay and silage they will eat, they can obtain the additional nutrients required from a single grain as well as from a mixture of several grains and byproducts—the present practice. * * * Experiments have shown that dairy calves can be reared without the use of any marketable whole milk, thus conserving butterfat for human use, and that all milk and milk products can be removed from the diet of calves at 90 days of age with little effect on subsequent growth.

Animal Disease Controls

A new method of giving phenothiazine to sheep in their salt will make it easier to control nodular worms and other injurious internal parasites. * * * It has been found that cecal worms—poultry parasites that transmit blackhead—can be controlled by giving flocks phenothiazine in their mash. * * * It has been found possible to reduce by over 50 percent the rotenone content of dusts used in treating cattle for grubs.

Improving Foods

A process has been developed for isolating riboflavin (vitamin B₂) from

whey in a concentrated and readily usable form. * * * It has been proved that soya, peanut, and cottonseed flours improve the biological value of wheat flour, oatmeal, and cornmeal, and recipes have been developed for adding soya flour to familiar dishes. * * * Much information has been published showing families how to choose food in relation to nutritive value, cost and availability in war-time.

Better Pharmaceuticals

Methods have been developed for increasing the yield of penicillin more than a hundredfold as well as fermentation processes, assay methods, and means for isolating and purifying this powerful new drug. * * * Some 131,000 high-grade seedlings of cinchona, the source of quinine, have been grown in this country and distributed in seven American republics, and 200,000 more are awaiting placement.

Technological Discoveries

A sulfite process, already in commercial use, has been developed for separating the proteins and enzymes from the starch of wheat and using the enzymes for converting the starch to sugar for fermentation into alcohol. * * * Millions of pounds of wet-picked chicken and turkey feathers from poultry-dressing plants can be preserved by a new method and converted into a fluffy down for pillows, mattresses, and other uses. * * * The development of vault and individual-bag fumigation of soldiers' clothing and equipment for protection against lice has been completed, and dosages have been determined for a wide range of temperatures. * * * A new combine that pulls, deseeds, and binds fiber flax in one operation promises to reduce the labor required in harvesting and processing. * * * A cheap practical procedure has been worked out for preventing the serious damage caused by insects to large quantities of wheat stored in farm-type bins.

E. C. AUCHTER
Agricultural Research Administrator

Distributing Food in 1944

FOOD PRODUCTION and food distribution must complement each other if the war food program is to be effective. The distribution process starts first with planning—the decision as to who is to get what and how much. This is called “allocation,” a type of work to which all other distribution programs are geared.

Tentative allocations to major claimant groups have been made for the 12-month period ending September 30, 1944. Those allocations indicate that, during the period, about 14 percent of our estimated food supply will go to meet American military requirements. Food shipments to the British, Russian, and other United Nations will total 11 percent. That will leave about 75 percent of the estimated supply for civilians—about the same as the civilian share this year.

The share of some of the more important foods shows considerable variation, however, depending upon the supply situation. This is indicated in the following table.

Allocation of Important Foodstuffs,
October 1, 1943 to October 1, 1944

Commodity	Military	Lend-lease ¹	U. S. civilians	Other ²
	Pct.	Pct.	Pct.	Pct.
Beef	24	1	73	2
Pork	11	20	66	3
Fish, Canned ³	14	23	47	16
Fish, fresh & frozen	15	0	85	0
Butter	16	3	80	1
Cheese	16	23	56	5
Milk, evaporated	41	13	43	3
Eggs, fresh	12	0	88	0
Eggs, dried	25	68	0	7
Canned fruits & juices ⁴	40	(⁵)	53	7
Citrus, fresh & canned ⁵	15	5	74	6
Canned vegetables ⁶	21	3	70	6
Fats & oils ⁶	6	22	66	6
Sugar ³	13	5	78	4

¹ Including liberated areas.

² Includes quantities in contingency reserves as well and other exports and shipments—mainly to U. S. territories and friendly nations.

³ Fiscal year allocation.

⁴ Excludes citrus.

⁵ Less than 1 percent.

⁶ Excludes butter.

Although food supplies are adjusted to avoid disruption of the normal flow

of food to consumers, the continued need for building up reserves of food for direct war requirements must be recognized. Butter, for example, must be accumulated by the Government during months of heavy production. During light production, the Government stops its butter buying. This tends to bring about an even flow of butter to civilians the year round.

Releasing Government Stocks

In some cases, stocks of Government-owned food are no longer needed for direct war use. The policy has been and will continue to be one of making such stocks available to civilians through regular commercial channels of trade.

When demand for certain foods is greatly in excess of supply, such foods will be rationed. But even under rationing, civilians will be better nourished than before the war.

Under the allocation procedure, civilians will get at least as much food—in total—as in pre-war years. With a larger segment of the population working, which makes it possible for more people to buy food in adequate quantities, together with rationing, which provides a fair share of the total supply to individual consumers, food will probably be more evenly distributed than ever before.

Then too, civilians are becoming more aware of nutritional values. They realize today that it is not only *how much* food that counts but *what kind*. FDA, through State, local, and country nutrition committees placed great emphasis on nutrition and food conservation in 1943—and they will be emphasized more in 1944.

Congress has authorized the use of \$50,000,000 by FDA for the Community School Lunch Program this year to assure an improved nutritional status for tens of thousands of school-age youngsters. A much more extensive nutrition-in-industry program has been planned for 1944, now

that most of the ground work has been laid.

Food orders will continue as the mechanism for handling specific distribution problems. Containing set-aside, restriction, conservation, or limitation provisions separately or in combination, food orders enabled the Government to meet direct war requirements for food as well as to facilitate the flow of foodstuffs to civilians.

Direct food industry assistance will be continued in 1944 on the theory that food processing and distribution are important extensions of the production job begun on the farm. In 1943 it was aided in several ways such as: help in financing the construction of new dehydration plants in areas where they were badly needed and could be operated efficiently; in clearing applications for priorities; in locating used equipment; and in clarifying manpower regulations.

Relieving Seasonal Gluts

Victory Food Selection programs will continue to be part of the machinery for handling seasonal abundances. This was demonstrated this past fall when consumers were urged to buy Irish potatoes during the harvest season. It is believed that this concerted effort saved millions of bushels of potatoes that would have frozen in northern producing sections because of a shortage of storage space.

Certain types of marketing service work will be continued on a broadened scale in 1944. Inspection, grading, and classification of farm products, for example, have shown a tremendous increase since Pearl Harbor. This trend will continue in line with the demand for foods that will ship well, store well, and taste well.

A great deal of work has been done and will be done to assure producers, distributors, and processors, that their packaging requirements will be met. During 1943, FDA stimulated considerable research in the development of containers of non-critical materials

for the packaging of fruits and vegetables in their various processed forms; better utilization of existing packages by increasing the quantity of food that can be packed in them.

An educational program was initiated and carried through in 1943 on the salvage and re-use of fruit and vegetable containers as a means of meeting industry requirements. As a result of new freight rates permitted on shipments of used fruit and vegetable containers from the North to the Southeastern States, southeastern fruit and vegetable growers are benefiting from reduced rates. Similar arrangements are under consideration for relieving the container situation on the Pacific Coast and in the Southwest.

Dehydration Increased

Processing of dehydrated foods will continue at record levels. At the present time, the combined capacity of American egg drying plants is 425,000,000 pounds and of vegetable dehydration plants, 200,000,000 pounds. Production of dehydrated pork has increased greatly, and a definite effort will be made to increase production of dried skim milk by placing emphasis on production in the Middle West, where there are large supplies of skim milk.

All efforts in the field of food distribution must be geared to the assumption that this will be a long war. But we must not and will not overlook the need for planning now for the peace. There will be problems as to post-war use of food processing plants, capacity of which has been greatly expanded to meet war needs; of handling stocks built up for war emergencies; and, more important, of planning for adequately feeding all our people here at home. It seems likely, that through the experience we are gaining now, we can do a much better peacetime job of food distribution in the future than we have in the past.

ROY F. HENDRICKSON, *Director*
Food Distribution Administration

Wood to Move Our Food

AN AMPLIE supply of food, indispensable to armies and to victory as well as to the peoples of the war-torn countries, must fail of its purpose without an adequate supply of satisfactory material for its safe packaging and transport.

The 1944 Forest Service projects are geared primarily to those activities which contribute to food production or distribution. Since Pearl Harbor, the peacetime activities of the Forest Service have been shelved, as far as public responsibilities permit, in favor of a variety of jobs helping in the prosecution of the war. There are three chief ones which have an integral place in the national food program.

Best estimates place lumber production in 1943 at about 33 billion board feet with consumption requirements around 36 billion. Demand for wood for army buildings has dropped, but that for packaging of food, war, lend-lease and other supplies has jumped from around 9 billion to 14 or 15 billion board feet. Next year, to pack food and agricultural products alone, it is estimated that 1¼ billion board feet of lumber and 3¼ billion square feet of veneer will be required; future contingencies may raise this huge amount.

Record Low Lumber Stocks

Against this tremendous demand, mill and yard stocks of lumber are down to a record low of about 7 billion feet, and mostly broken grades and sizes at that. Farmers who sought material for brooder houses and other productive farm buildings this year, before special priorities on 500 million board feet for such purposes were issued, fully understand the significance of this situation. And the prospect of a similar one in 1944 cannot be ignored.

Last fiscal year, on National Forests the cut was an all-time "high" of 2,359,463,000 board feet, 83 percent above 1939. And private industry was doing a prodigious production

job too, irrespective of how wisely the bulk of private timber was cut—incidentally some of this cutting was very well done—though handicapped by labor shortages, equipment troubles and weather. Even so, this output could not match the demand. Small farm and other woodlots certainly were needed to save the situation. And it is an interesting tribute to the farmer that our forestry projects for increasing timber cut turned in considerable part to his rich but misused resource.

Going into 1944, Timber Production War Project is one of our two major means of increasing production of lumber, veneer and pulpwood. Organized and directed by the Forest Service under a cooperative agreement with the War Production Board, it has the close cooperation of other Federal and State agencies. The present staff of this project consists of about 130 technical Forest Service men, 30 full-time experienced woodsmen, and 200 trained, part-time workers from cooperating agencies working in all States east of the Great Plains except Massachusetts, Rhode Island, Connecticut, Pennsylvania, New Jersey, Delaware, and West Virginia.

This force is doing the grinding job of helping thousands of individual farmers and small woods owners get their timber to mill, and in turn to the box factory. They sell the idea to the uninformed, the ill-equipped, and the reluctant. They help protect the owner's woods and finances by sound forestry counsel. With United States Employment Service help they bring labor to the job and in a sense the job to labor. They facilitate complicated business and Government transactions. They rustle equipment, trucks, tractors, and tires. They strive to keep small mills going.

The other major timber production project, Farm Woodland Marketing Program, was first planned to give

technical aid to farmers in harvesting, utilization and marketing of wood products, but it is also doing yeoman service in getting out the wood without destructive cutting and with fair return to the owner. Keymen here are the farm foresters, now working in 82 project areas, jointly designated by the Forest Service and State Forestry or Extension services, in 300 counties and 28 States, all east of the Great Plains except for Oregon.

Third among the projects of the Forest Service singled out here, the National Forest Range, continues into 1944 making its invaluable contribution to the nation's food supply. Through constant contact with livestock users, the Forest Service helps permittees with the many adjustments in the use of the range made necessary by war changes in their operations. Of particular value is the exchange of information and ideas on production and marketing of livestock carried on through some 800 national-forest livestock associations and advisory boards.

In addition to the three war projects

detailed above here are some of the others that will continue. As before, Sitka spruce for planes will be rafted down from Alaska National Forests. * * * Collaboration with WPB, OPA, and other agencies will go on in determining forest products requirements, supplies, and output. * * * The Forest Products Laboratory will continue design of economical military crates and containers, and work in the wonder world of plastics, plywood, and wood chemistry. * * * The Emergency Rubber Project will proceed.

Beyond these projects bringing immediate returns will be the planning of thousands of jobs for returning soldiers, and unceasing efforts toward solution of the most urgent problem of American forestry—stopping destructive cutting so that the productivity of every forest acre now bearing merchantable timber may be maintained or increased.

LYLE F. WATTS, *Chief*
U. S. Forest Service

Farmers' Stake in Holding the Line

FOR A SOLID YEAR the country has been struggling to hold the line on the cost of living and wages.

As 1943 draws to a close, this policy, laid down by the Congress in the Stabilization Act of October 1942, is under attack from every side. Most of the arguments are familiar to all. Many of them unfortunately wander off the real issue, which is simply whether the country dares risk inflation. I want at this time to add a very simple argument for holding the line, an argument that is based strictly on the record—on the farm record.

When war broke out in 1939 farmers were receiving better prices than in the depth of the depression, but they still had a long way to go before their prices were back in balance. In August 1939, prices received by farmers were 72 percent of parity.

In May 1940, when the defense program was launched, farm prices were still only 77 percent of parity. At the very outset of the program, one of the Defense Commissioners was given responsibility for watching price developments and for checking unnecessary increases. This meant selective price control, control applied to prevent prices from rising which were already high enough and to permit prices to rise which were too low.

Between May 1940 and September 1941, farm prices rose steadily, while other prices were markedly restrained. The result was that in September 1941 farm prices attained parity for the first time in more than 20 years. Price control was paying off for farmers.

In the 25 months between August 1939 and September 1941, farm prices

increased 58 percent and carried the price parity ratio up 40 percent, from 72 to 101. Since September 1941, however, and down to October of this year—also a period of 25 months—while farm prices have continued to rise, increasing by 38 percent, the parity ratio has increased by only 15 percent. Once parity was reached, further increases of farm prices exerted a growing pressure upon the prices paid by farmers.

Price Peak Near

Beyond a certain point, the prices paid by farmers will rise more rapidly than the prices they receive. Failure to hold the line on the cost of living could cause this point to be reached very speedily. Once that happens, the gains made by farmers will begin to melt away. It happened in the last war. It can easily happen again.

It is not generally realized that in the last war, the prices paid by farmers moved up after 1917 faster than the prices they received and their relative price position steadily worsened.

By 1918, farm prices had doubled their 1914 levels. Rising prices of commodities used in farming had offset 85 percent of this rise of farm prices, however. Furthermore, increases in the prices of the commodities needed for family use cut the real value of farmers' net income savagely. In dollar terms, the net income of farm operators in 1918 was 121 percent greater than in 1914. But in terms of purchasing power it was only 26 percent higher, down 4 percent from 1917. In 1918, farmers began to fall behind in the inflationary race, the race which was to bring them to disaster lasting 20 long years.

In 1919, the process continued, and despite a further increase of 5 percent in farm prices, the real income of farm

operators fell back to within 7 percent of their 1914 real income.

The contrast in this war is striking. The rise of 104 percent in farm prices has been accompanied by a rise of \$8.3 billion, or 182 percent, in farm operators' net income. After adjustment, farm real income is still double that of 1939—nearly 4 times the improvement between 1914 and 1918. And this time, unless invited, the losing race of 1919 and the crash of 1920 need never be repeated.

By the end of the last war, inflation was robbing the farmer of 93 cents out of every dollar it conferred on him. When the dizzy ride finally ended, he was dumped out. Not for 20 years did he fully regain his feet. Thus far in the present war, price control has been a major factor in enabling farmers to attain record-breaking incomes, with the trend still upward and with the economy still strong and still in balance.

Whether 1944 will see that trend continue or whether, as in 1918 and 1919, the prices farmers pay will rush up faster than the prices they receive—and whether farmers shall again face 20 years of heartbreak—depends on whether the country decides to continue holding the line.

Inflation Tricky

The farmers' stake in the hold-the-line policy is plain. So are the risks they run if it is abandoned. Inflation is a tricky foe and its greatest trick is to assume the guise of friend. Farmers, above all other economic groups in America, should know how sinister is this disguise and how vigilant must be their guard against letting inflation break through the line at any point.

CHESTER BOWLES, *Administrator*
Office of Price Administration

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Income of industrial workers (1935-39=100) ²	Cost of living (1935-39=100) ³	1910-14=100					Prices paid, interest and taxes	Farm wage rates
				Wholesale prices of all commodities ⁴	Prices paid by farmers for commodities used in—					
					Living	Production	Living and production			
1925.....	90	126	125	151	163	147	156	169	176	
1926.....	96	131	126	146	162	146	155	168	179	
1927.....	95	127	124	139	160	144	153	166	179	
1928.....	99	128	123	141	160	148	155	168	179	
1929.....	110	134	122	139	159	147	154	167	180	
1930.....	91	110	119	126	150	141	146	160	167	
1931.....	75	84	109	107	128	123	126	142	130	
1932.....	58	58	98	95	108	109	108	124	96	
1933.....	69	61	92	96	108	108	108	120	85	
1934.....	75	76	96	109	122	123	122	129	95	
1935.....	87	86	98	117	124	127	125	130	103	
1936.....	103	100	99	118	123	125	124	128	111	
1937.....	113	117	103	126	128	136	131	134	126	
1938.....	89	91	101	115	122	125	123	127	125	
1939.....	109	105	99	113	120	122	121	125	123	
1940.....	126	119	100	115	121	124	122	126	126	
1941.....	162	169	105	127	131	131	131	133	154	
1942.....	199	238	117	144	154	149	152	151	201	
1942 September.....	208	256	118	145	157	151	154	153	.....
October.....	215	262	119	146	158	151	155	154	220	
November.....	220	271	120	146	160	151	156	155	.....
1943 September.....	244	316	124	151	171	167	169	165	.....
October.....	245	.....	124	150	172	167	170	166	230
November.....	.....	.....	.....	.....	173	168	171	167	.....

Year and month	Index of prices received by farmers (August 1909-July 1914=100)							Ratio, prices received to prices paid, interest and taxes
	Grains	Cotton and cotton-seed	Fruits	Truck crops	Meat animals	Dairy products	Chick-ens and eggs	
1925.....	157	177	172	153	141	153	163	150
1926.....	131	122	138	143	147	152	159	145
1927.....	128	128	144	121	140	155	144	139
1928.....	130	152	176	159	151	158	153	149
1929.....	120	144	141	149	156	167	162	146
1930.....	100	102	162	140	134	137	129	126
1931.....	63	63	98	117	92	108	100	87
1932.....	44	47	82	102	63	83	82	65
1933.....	62	64	74	105	60	82	75	70
1934.....	93	99	100	103	68	95	89	90
1935.....	103	101	91	125	117	108	117	108
1936.....	108	100	100	111	119	119	115	114
1937.....	126	95	122	123	132	124	111	121
1938.....	74	70	73	101	114	109	108	95
1939.....	72	73	77	105	110	104	94	92
1940.....	85	81	79	114	108	113	96	96
1941.....	96	113	92	144	144	131	122	122
1942.....	119	155	125	199	189	152	151	157
1942 September.....	119	156	129	191	195	156	166	163
October.....	117	158	134	226	200	165	173	169
November.....	117	160	127	238	197	171	178	169
1943 September.....	158	171	204	311	207	185	201	193
October.....	162	171	197	264	203	187	212	192
November.....	163	165	207	295	192	190	217	192

¹ Federal Reserve Board, adjusted for seasonal variation. Revised November 1943.

² Total income, adjusted for seasonal variation. Revised March 1943.

³ Bureau of Labor Statistics.

⁴ Bureau of Labor Statistics index with 1926=100, divided by its 1910-14 average of 68.5.

⁵ Revised.

NOTE.—The index numbers of industrial production and of industrial workers' income shown above are not comparable in several respects. The production index includes only mining and manufacturing; the income index also includes transportation. The production index is intended to measure volume, whereas the income index is affected by wage rates as well as by time worked. There is usually a time lag between changes in volume of production and workers' income, since output can be increased or decreased to some extent without much change in the number of workers.

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